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A P P E N D I X.

XV.—Extracts from the Journal of an exploring Expedition into Central Australia, to determine the Course of the River Barcoo (or the Victoria of Sir T. L. Mitchell). By the late Mr. E. B. KENNEDY, of the Surveyor-General's Department, Sydney.

Communicated by the Rev. W. B. CLARKE, M.A.

To the Secretary of the Royal Geographical Society.

SIR,

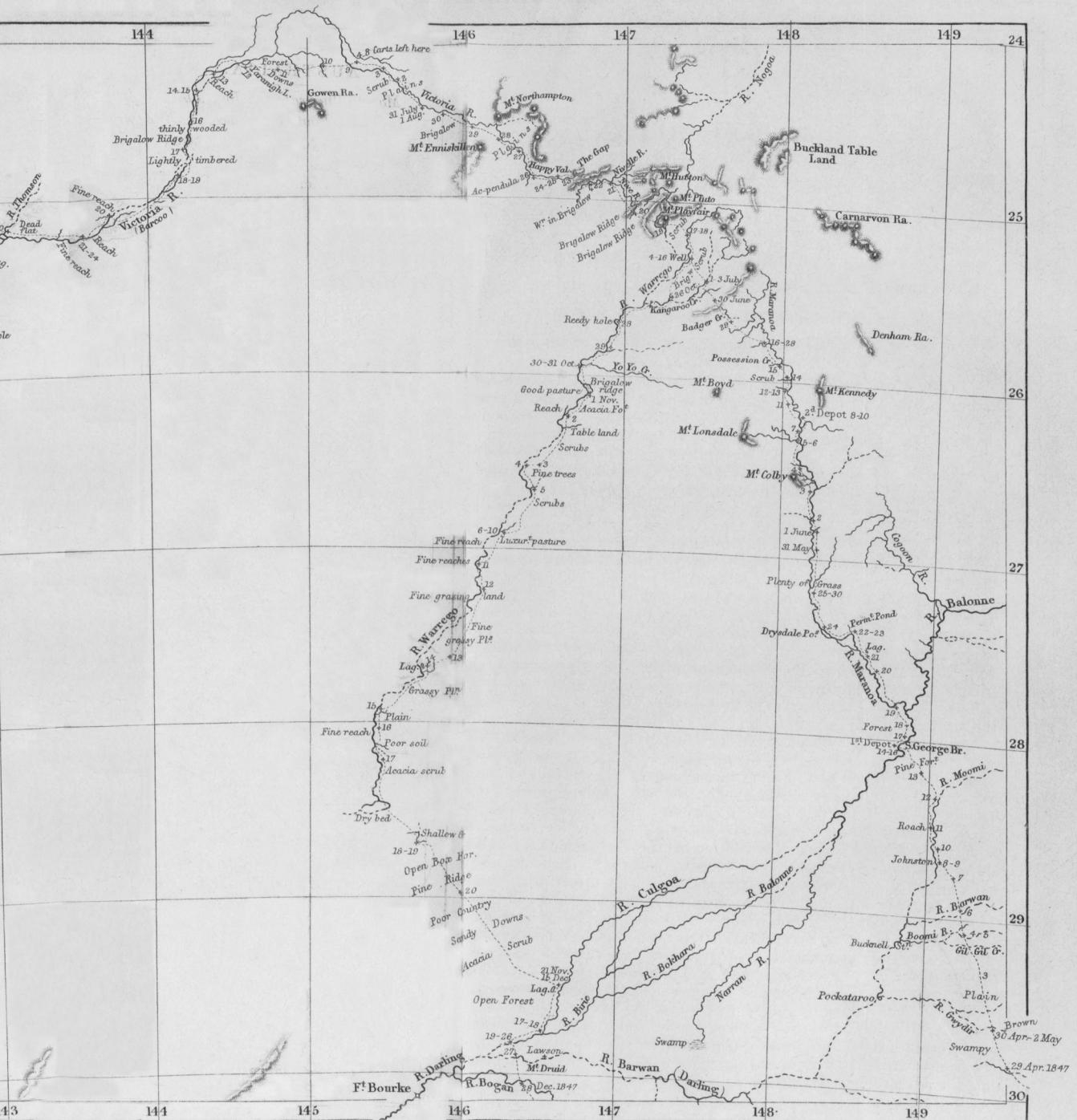
LIEUT.-COL. SIR T. L. MITCHELL, Surveyor-General of New South Wales, having returned from his expedition into tropical Australia, in search of an overland route to the Gulf of Carpentaria, without having ascertained the final course of the River Barcoo or Victoria, whence the expedition returned, that officer proposed to the Colonial government that a further exploration should take place by a party under the command of Mr. Kennedy; and instructions were accordingly directed to that gentleman to pursue the route pointed out by the Surveyor-General. Those instructions are printed in the Journal of Sir T. L. Mitchell's Expedition into Tropical Australia, pp. 406-411, published in 1848; and the reader is referred to those instructions and to the following journal for proof of the accuracy with which Mr. Kennedy obeyed them.

Mr. Kennedy having been selected in the early part of 1848 to explore the York Peninsula, found the interval between that period and his return from the Victoria too much occupied to allow him to edit his journal. At his own request therefore, and at the suggestion of Captain Owen Stanley, R.N., with the concurrence of the Colonial Secretary and Mr. Kennedy's personal friends, I undertook the duty of compiling a narrative of the expedition.

The melancholy termination of the late expedition to the York Peninsula in the massacre of the gallant leader, and the deaths by sickness of all his followers but three (the circumstances of which have been detailed by one of the survivors, Mr. W. Carron), has induced me to change my original plan; and in the anxious desire to do honour to the memory of a brave, kind, and intelligent friend, whose calamity has excited the most painful interest in the community, I have thought it better to make as little alteration as possible in the narrative drawn up by himself day by day, than to condense the statement from his journals. I think this will furnish the best testimony to his zeal and devotion to the service; and exhibit, better than any comments, his sagacity, skill, patience, and integrity, qualifications which are essential to successful travel, together with that general amiableness of disposition and that sense of moral and religious obligation which were conspicuous in his conduct.

According to the oral testimony of his companions he had, in an eminent degree, many of those attributes of character, and much of that intelligence, which would have eventually, had it not pleased Providence to close his career, raised him to eminence in the annals of geographical research.

To the credit which he gained by his first explorations must now be added the interest attached to his memory by the unfortunate termination of his career; and if he did not achieve any brilliant exploits in the field, he has the merit of having offered his life as a sacrifice to the cause of geographical science and the advancement of Australia.



The apparent defect in this Journal as regards that important question, the level of the Desert, was the result of an accident.

Sir T. L. Mitchell furnished Mr. Kennedy with the use of the excellent siphon barometer which he had employed in his own expedition to the Victoria; but, on the 24th of March, 1847, eleven days only after the party left Sydney, on suspending the instrument to a tree for the purpose of taking the elevation of a spot on the N. of the Hawkesbury River, which that day had been crossed, the branch gave way and the barometer was broken; and, on returning to Sydney, *no other instrument was found available for the journey.*

It is to be regretted that we have therefore no accurate data for calculating the depression of the Australian continent along the course of the Victoria; and the state of the Desert, as detailed by Kennedy and Sturt, renders it improbable that such information can now be easily obtained.

It cannot but be desirable that the ingenuity of men of science should be directed to supplying some means more portable and less fragile than those upon which so large an amount of calculated altitudes now depends.

Dr. Leichhardt's extraordinary journey to Port Essington would have been infinitely more useful had he possessed the means of levelling on his route. He felt this so much that, on his subsequent attempt to cross the continent, and on setting out on his present journey, he left his barometer in my charge, and took with him a boiling-water apparatus, which I lent him, but which, owing to the saline condition of the waters in the interior, would probably give him inaccurate results.

Having myself used extensively various barometers of the Aneroid construction in taking elevations in Australia, I wish here to point out that if a proper correction could be devised for the effects of temperature, and the instrument could be made equally portable as now with sufficient expansion of the interior vacuum-box to allow of measurements up to 6000 or 7000 feet, and the addition of a vernier to enable accurate divisions of the inch into thousandths to be read off, the Aneroid Barometer would be an invaluable assistance to surveyors in general, and to explorers in particular.

Some remarkable coincidences between altitudes ascertained by levelling, and by the Aneroid, prove to me that, in certain conditions of the atmosphere, this instrument even now, used carefully, is *perfect*. But, for an extensive journey over broken ground, in this variable climate, it is not always to be relied on. I consider myself justified in calling the attention of the Royal Geographical Society to this instrument, after having tested it in about a thousand sets of observations, at all elevations up to 2000 feet.

The following Journal throws much fresh light upon the course of the Lower Barcoo, and the desert between the Warrego and the Culgoa, and completes the history of all the expeditions up to the present date, excepting only that of the long expected Leichhardt. It commences after the arrival of the expedition at the Wollombi—the party having left Sydney on the 13th of March.

W. B. C.

April 1st. Proceeded on our journey, crossed the creek at about a mile and a half from our camp of the previous night, and after travelling a distance of 17 miles, encamped by the side of Mr. Blaland's fence at Fordwich (native name *Kinnelan*).

2nd. Continued our journey towards Muswell Brook, at a distance of 6 miles, crossed the Jerry Plain's road, near the Cock Inn, and proceeded along the new line of road; forded the Hunter at Mr. Smith's farm, and encamped about 5 miles from the river, after a journey of 16 miles.

3rd. At an early hour our party were in motion, and at 2 p.m. encamped at Muswell Brook, after travelling a distance of 14 miles. Wrote to Captain King respecting a barometer, and purchased some meat for the party.

4th. This being Sunday we remained encamped at Muswell Brook ; the thermometer (Fahrenheit) stood in the tent at 102°, being 58° higher than on the previous Wednesday.

5th. Proceeded from Muswell Brook to Sccone, a distance of 16 miles, where we arrived at 2 P.M., and where, by the payment of a trifling gratuity, we were allowed to turn our horses into a paddock belonging to a person of the name of Glanfield.

6th. Travelled a distance of 16 miles and encamped at Jack Shea's Water-hole or lagoon, about a mile beyond the "Shetland House" Inn ; the weather mild and pleasant.

7th. Continued our journey across the range and through the valley of the Paye, in which is situated the Township of Murrurundi. At the distance of a mile and a half from the Township we crossed the steepest part of the Liverpool Range, which forms the boundary of the colony, and encamped in Doughboy Hollow. I was forcibly reminded to-day of the character of the country through which we were travelling, by being told by one of our bullock-drivers that we should find water in the Round Waterhole (a few miles farther on), and that there would be plenty for 2 or 3 days to come. That scanty supply is all the water on the road for a distance of upwards of 20 miles, and on such surface-water we must continually depend, often running the risk of finding it dry upon our return.

8th. Our horses having had a fatiguing day's work crossing the Liverpool Range yesterday, I thought it prudent to encamp at the Round Waterhole, 7 miles from Doughboy Hollow.

9th. Proceeded on our journey at an early hour, and at a distance of 9 miles passed the junction of the Mokai and Peel roads. Encamped at Loder's station, on the Liverpool Plains, after a journey of 12 miles. Thunder-storms were playing about us during the afternoon, and at 8 P.M. a very heavy one passed over the camp.

10th. Travelled as far as Curribubula, where there is an inn kept by a person of the name of Davis ; the distance from Loder's to Curribubula is estimated at 25 miles, but I should consider it nearer 20. Heavy thunder-clouds were observable all day.

11th. Anxious to reach Pringle's station on the Peel, where I was to procure a ton of flour, I travelled, contrary to custom, on this day (Sunday) in order to escape the rain, which appeared to be setting in. On arriving at the turn off to Pringle's, two bullock drivers persuaded me that the road I was about to take was the wrong one, and I did not discover this error till we had gone about 5 miles out of our way. Encamped at the Clay Waterholes, 10 miles from Tamworth, I inquired of a carrier I met here what he would charge for conveying flour 200 or 300 miles on my journey, to which he replied 1/- a hundred.

12th. I instructed Mr. Turner to conduct the party to Pringle's by the road we had missed, while I proceeded to Tamworth to inquire for letters, and to procure a native to accompany the expedition. Found a letter from Captain King kindly offering me the loan of a barometer, if I could ride over to his place for it, a distance of upwards of 150 miles. Having completed my business at Tamworth and received the promise of a horse from Mr. Commissioner Bligh, I rode to Mr. Pringle's (17 miles) to meet my party, and to endeavour to make such arrangements as would admit of their continuing their journey while I was absent at Port Stephen's. On my arrival I found Mr. Pringle away from home, but wrote a note to him expressing my wish to purchase of him a cart, horse, harness, &c., and saying that as I was anxious the party should proceed with as little delay as possible, I would give him his own price for them.

13th. Started for Tahlee, the residence of Captain King, taking with me a

man in the hope of purchasing the cart, &c., I required within the first 15 or 20 miles. On arriving at the Commissioner's (Mr. Bligh) I learned to my great disappointment that the horse he had promised to lend me could carry me only 30 miles a day, whereas I required him to perform a distance of upwards of 160 miles before the 16th. Seeing that my only chance of reaching Tahlee in time was by riding my own horse, and that in doing so I should be absent from my party a longer period than I considered justifiable, I was compelled with much reluctance to abandon the attempt. I accordingly returned to Mr. Pringle's, where I arrived at 7 P.M., having been caught in a heavy thunder shower. The flour, according to my directions, had been packed in 50 lb. bags, and a canister of powder was placed in the centre of each.

14th. Continued heavy rain throughout the day, which would have prevented our travelling had we been prepared to do so.

15th. The rain of yesterday and last night rendered the ground impassable for drays. Mr. Pringle returned home at noon and I purchased from him a cart, horse, shaft and leading harness, with canvas for a cover. The cart requiring some repairs, our blacksmith was employed during the afternoon in mending it. Mr. Turner took an inventory of our equipment, and we had the horses all branded \uparrow on the near shoulder.

16th. The blacksmith finished the repairs to the cart and shod the horse. The drays were carefully loaded and preparations made for an early start in the evening. Paid Mr. Pringle for the purchases I had made of him by cheques on the bank of Australasia.

17th. Travelled 18 miles to Mr. Stow's station, at Carroll, crossed the Namoi river, and encamped on the N. side of it. Mr. Turner remained at Mr. Pringle's to bring on any letters that might arrive by the post.

18th. This being Sunday we remained encamped on the Namoi.

19th. Proceeded on our journey down the N. bank of the Namoi, and, after travelling a distance of 16 miles, encamped on the river: weather showery throughout the day.

20th. We continued our journey down the N. side of the river till we reached Mr. Wentworth's head station, when we crossed it, or rather its channel, and thus proceeded to a lagoon 7 miles distant, where we encamped.

21st. Started at an early hour, and after travelling 6 miles, arrived at Mr. Town's Station, where we remained for a short time, and then proceeded on to Dr. Adam's station, where we encamped after a journey of 16 miles. The grass having been abundant at our two last camps, we directly hobbled our horses, but did not tether them. The weather showery.

22nd. Resumed our journey, and at a distance of about 8 miles passed Lady Jamison's station, where I procured from the overseer an aboriginal youth, named Harry, to accompany the expedition; encamped about 15 miles from Dr. Adam's station.

23rd. It rained heavily last night and this morning, but anxious to cross the Namoi while fordable, we continued our journey, and at a distance of about 5 miles passed over to the right bank of the river. Passed one of Mr. Wentworth's stations in the course of the day, and encamped in the neighbourhood of Mr. Doyle's station, after a journey of 15 miles. Showers at intervals throughout the day.

24th. The ground was in such a state this morning from the effects of the rain which had continued almost without intermission during the night that I deemed it advisable to halt for the day, although I did so with much regret, being anxious to proceed with as little delay as possible.

25th. This being Sunday we remained in camp according to custom.

26th. At an early hour this morning we resumed our journey, traversing the Galathera Plains, and after travelling 16 miles, encamped on a creek called Galathera. I had the satisfaction of finding that we had gained rather than

lost by our halt of the two previous days, for the plains were in such a state that, notwithstanding the heat of yesterday, coupled with a frosty night, it was with considerable difficulty that we were able to cross a portion of them.

27th. At starting this morning one of the leading horses broke a hame, which being replaced by a wooden one, we resumed our journey after about an hour's delay. Encamped at the Ten-mile Creek.

28th. The thermometer (Fahrenheit) stood this morning at 34° in the tent. Continued our journey, and crossing a boggy creek, encamped, after travelling a distance of 12½ miles, near Brown's station, at Milli. At 3 p.m. the thermometer stood at 70° in the tent.

29th. Struck the tents and quitting the Settler's road, followed Sir T. Mitchell's track to Camp 89, on the Moomins, where we found much less water than when we left it in December. The track of Sir Thomas's drays was scarcely discernible across Brown's run.

30th. Continued our journey over a very heavy country subject to inundation, and through a flooded box-forest. The water seen in the marsh on our previous journey had disappeared, and on arriving at Sir T. Mitchell's camp on the 12th and 13th of December, we found the channel of that creek dry, and were, therefore, compelled to proceed by a forced march to the Gwydir, which we only reached at sunset. Owing to the heavy nature of the ground over which we had travelled, our draught horses were completely knocked up.

May 1st. Having had a long day's journey yesterday, and knowing that we should have a distance of 27 or 28 miles to travel, after leaving this, without water, we halted to-day to refresh our horses. Mr. T. Brown, who has a station between 2 and 3 miles to the eastward of Sir T. Mitchell's track, called at the camp this afternoon and kindly supplied the party with beef and milk.

2nd. As we had encamped upon the river, about a mile E. of Sir T. Mitchell's track, owing to our having lost it on the plains, we dropped down to it this afternoon, and made preparations for our long journey without water, by distributing our baggage among the horses, so as to lighten the carts as much as possible. About noon to-day it blew a hot wind from the westward, which appeared to be the forerunner of a thunder-storm, but it cleared in the evening.

3rd. At an early hour this morning we commenced our long dry march, the men walking and leading their horses, which were laden with a portion of the contents of the carts. Fortunately the day was cool, but the ground over which we travelled was heavy. At 3h. 30m. p.m. we encamped at Sir T. Mitchell's old camping ground.

4th. Proceeded on our journey in light marching order, but in consequence of our cart-horses gibbing a good deal our progress was slow. At a distance of 10 miles we reached the Gil Gil, but found barely sufficient water in it to refresh our horses, so after an hour's rest we continued our journey and encamped at 5h. 30m. p.m. at a lagoon 1 mile distant from Camp 88.

5th. Having accomplished last evening a distance of 33 miles without water I allowed the horses to feed until the afternoon, and rode down to Mr. Bucknell's station, about the fords on the Barwan and Boomi, but did not find any one at home to give me the necessary information. I took 2 natives whom I found at the station back with me, however, in the hope of being able to obtain from them the desired intelligence through my interpreter Harry, and on arriving at the camp was told that Mr. Bucknell's stockman had been there, and said we must cross the Boomi at their station 3 miles down, and then proceed to Long David's, 15 miles further out of our way: I therefore preferred trusting to my guides, and we accordingly continued our journey along Sir T. Mitchell's track to the Boomi, and had travelled about a mile up the river, when the younger native showed us a part of the channel

nearly dry ; here we crossed by means of a few logs which we laid down, and tracing the river back, encamped on Sir Thomas's track on the N. side of it. In the evening 3 natives arrived at the camp from Mr. Bucknell's station, a distance of 5 or 6 miles, bringing a note and 40 or 50 lbs. of beef for the use of the party.

6th. Having dispatched the natives back again with a note of thanks we proceeded with our guides along the track to the Barwan, on reaching which we were engaged for some time in searching for a practicable ford, and at length discovered a very good one about a mile above the place where Sir T. Mitchell crossed. Encamped at 3 p.m. on the N. bank of the river.

7th. Our guides conducted us through the intricacies of the lagoons to Sir Thomas's track from the Moonii, distant from our camp about a mile : there we parted with our guides, whom I rewarded for their good conduct by making each of them a present of a fig of tobacco, at which they appeared much pleased, and seemed sorry to leave us. We continued our journey along the track through a rosewood scrub, and encamped on a plain 13 miles from the Barwan without water.

8th. Travelled a distance of 11 miles to Johnston's station, on the Mooni, where we encamped ; the aspect of the weather made me fear that the rainy season was setting in ; for all day long cloud after cloud continued to drive from the S.W.

9th. This being Sunday we halted according to custom.

10th. Proceeded 8 miles up the river and encamped.

11th. Continued our journey, and after travelling 14 miles reached Roach's, the outside station of the settlers. In the evening wrote to Captain Perry.

12th. Having left my letter at Roach's to be forwarded, and procured a twelvemonth's supply of grease for our cart wheels, we took our departure from the last station and proceeded along Sir T. Mitchell's track for a distance of 8 miles, where we encamped early in the afternoon.

13th. Continued our journey towards the Balonne, and after travelling 10 miles encamped in an open pine forest. Sent the horses to water at a swamp about a quarter of a mile distant, bearing E.N.E.

14th. The horses having been on the tether all night were taken to water at daylight this morning, and at 8h. 30m. A.M. our party were again in motion. After proceeding about 9 miles, Boxer, one of our shaft horses, was knocked up, and we were obliged to change him ; at a distance of 9½ miles we were compelled to make the circuit of a swamp through which Sir Thomas's road had passed on the previous journey, it being then dry. From this to within 4 miles of Camp 8 the track is only discernible to a native's eye, but with Harry's assistance we were enabled to keep it, and about 5 p.m. arrived at St. George's Bridge ; we found a rapid current in the river, but encamped in safety on our old ground at 5h. 30m. p.m.

15th. Two of our cart horses being knocked up yesterday I deemed it necessary to give them two days' rest before proceeding to the 2nd Depôt ; issued 5 rounds of ammunition to every man in the party, and the regulations I had drawn up at starting. Commenced our night watch this evening.

16th. Three natives were seen by Wall this morning. At 11 A.M. divine service was performed.

17th. Proceeded on our journey and encamped at Camp 9 of Sir T. Mitchell. In the afternoon Wall encountered two natives at a short distance from the camp ; one of them spoke two or three words of English, and both appeared desirous of coming up to the tents, but *that* I could not allow, and on my dispatching two men with fire arms for the purpose of driving them away, they took to their heels.

18th. Continued our journey, and at a distance of 2 miles were obliged to leave Sir Thomas's track, which ran along the bed of the river. In conse-

quence of the late floods having rendered the ground impassable we therefore proceeded through the forest ground and came upon the river again, about 2 miles from Camp 10. Followed the track along its bed for a short distance, but were soon obliged to regain the forest ground, and at length encamped between Camps 10 and 83. Passed two parties of natives fishing, but did not speak to them. Just as we were passing the second party one of our carts upset, and the men were engaged 20 minutes in setting all to rights again, but the accident had only the effect of withdrawing them 20 or 30 yards.

19th. At an early hour we were on the move, and after travelling about a mile and a half, arrived at Camp 83, and turned into the track that led to the Maranoa. I was exceedingly anxious to see the bed of that river, as I considered it might be taken as a fair indication of the fortune (either good or bad) that awaited us on our journey. On reaching its bank, where we encamped, I found to my great satisfaction that a flood had washed its channel since we last crossed it, and that there was an abundant supply of water. Examined the arms and ammunition. Natives were seen by Wall about a mile from the camp.

20th. Several natives were seen this morning by the men who brought up the horses. Crossed the river, or, more properly speaking, a dry channel, and, after a journey of 14 miles, encamped on the Maranoa. Found water in small holes on the surface, but abundance may be obtained anywhere by digging in the sand.

21st. Proceeded as far as Camp 82, a distance of only 9 miles, but owing to the soft and yielding nature of the ground over which we travelled, it proved a fatiguing day's journey, especially to our cart-horses, which suffered much in spite of our efforts to relieve them by constant changes. Water was more abundant here than on our former visit. At about 8 P.M. rain commenced, accompanied with thunder and lightning.

22nd. Anxious to lose as little time as possible, we proceeded on our journey, and, after accomplishing a distance of 11 miles, encamped in a drizzling rain on the water marked permanent in Sir T. Mitchell's map. Wall shot one of the porphyry-headed finches.

23rd. Halted this day (Sunday). Laid down the Victoria on my general map (Arrowsmith's), by doing which I find that the general course of the river turns towards the N.E. bend of one which Sturt left in $25^{\circ} 9' S.$ and $138^{\circ} 6' E.$ I hope that the Victoria does not, like the Balonne, split into minor creeks, which flow towards the desert.

24th. This day having been appointed for the trial of some gibbing horses, our progress was but slow, and it was only by taking some of the flour off the drays, and distributing it among such of the pack-horses as could carry it, that we could get on at all. Encamped at sunset at Drysdale Ponds. In those, at which Sir Thomas's cattle watered, there was but a little water, but about a mile to the westward the men found a large and apparently deep lagoon, a continuation, I imagine, of the same ponds.

25th. Continued our journey along the track, and after travelling 9 miles encamped without water. The bed of the river appearing moist we commenced digging a well, but at a depth of 6 feet were stopped by a stiff dry clay. Convinced from the number of birds about us that there must be water in the neighbourhood, I dispatched Douglas and Harry in search of some. The former returned unsuccessful, but was closely followed by Harry, who had crossed our channel and found some in a larger branch of the river, about a mile off, running in a parallel direction. There was no water on the surface, but by digging with his hand he obtained some. Two men with kegs were accordingly dispatched, with which they returned soon after dusk.

26th. Continued our journey, and at a distance of 12 miles found water in a flat by the roadside, at which we encamped.

27th. It commenced raining about 4 A.M. and continued without intermission throughout the day. We accordingly remained where we were, and as there was plenty of grass for the horses, and it would be necessary at all events to give them a couple of days' rest before leaving the Maranoa, I did not regret the delay.

28th. Rain all day, with heavy squalls from the N.E., and every appearance of its continuing.

29th. It rained heavily throughout the night, but cleared up towards morning. The ground, however, being too saturated to admit of our travelling, we remained encamped. The river is less than three-quarters of a mile to the westward of the camp, and there being a fine permanent sheet of water this spot would be well situated for a station.

30th. (Sunday) remained in camp.

31st. At an early hour this morning we resumed our journey, and after travelling 9 miles encamped at the sheet of water, Camp 80. Our horses, although much refreshed by their rest, had, nevertheless, a hard day's journey, to draw the carts over the still saturated ground. At the spot where Sir T. Mitchell left the tomahawk, we found an unusual number of native camps, their proprietors no doubt having been attracted to the spot in the hope of a similar piece of good fortune.

June 1st. Continued our journey, but, from the heavy rain which appeared to have fallen in this direction, the ground was almost impassable. The whole country travelled over to-day was completely saturated, besides being naturally a heavy loose soil. Encamped at a fine sheet of water, 4 miles below Camp 79.

2nd. Arrived at Camp 79; but from the effects of the flood which appeared to have lately taken place in the river, the ascent of the west bank was so steep that we were obliged to encamp and employ the men in cutting a road for the carts. The promising appearance of a creek which joins the river here from the westward induced me to ride up it for 4 or 5 miles, at which distance it still contained water. Its junction with the Maranoa is more imposing than the junction of that river with the Balonne; and I am inclined to think it comes from a distance, and may be a river of some importance higher up.

3rd. Crossed the river, and proceeded as far as Camp 78; found the grass on fire in two or three places.

4th. Proceeded along the track to within a mile of Camp 77, where we halted, to avoid the détour made by Sir T. Mitchell for want of water. All the creeks having their sources in Mount Colby ridge now contain water.

5th. Continued our journey along the track at a quicker pace than usual until we arrived within 2 miles of Camp 76. Here the plains became so soft and swampy, from the late rains, that each cart had to be drawn by four horses instead of two; and, from the delay thus occasioned, we had to grope our way through a scrub in the dark, and did not arrive at Camp 76, at the junction of the deep creek with the Maranoa, until 7 p.m.; all our draught horses suffered much from the latter part of this day's journey.

6th. Halted, as usual, on this day (Sunday), and much need our horses had of rest.

7th. Started this morning with a hope that we might reach Camp 29 (the Dépôt); but finding, at 3½ p.m., that we were 5 miles distant from it in a direct line, and that, in order to reach it, we should have to cross the Maranoa twice, I deemed it advisable to encamp, and set the men to cut away the river bank, for the greater facility of crossing in the morning. Up to this time our progress has been very slow, but it has been greatly impeded by the late heavy rains. A considerable portion of this day's journey has been over what would be in a dry season hard forest ground, but which has been rendered almost impassable by the wet weather.

8th. Proceeded on our journey, and at length arrived at the Depôt. I shall never forget the mingled sensations I experienced on reaching it, and seeing my tent pitched in exactly the same spot it had occupied the year before, during the five months I remained in charge of the Depôt. I was much pleased at finding everything in exactly the same state as we left them, and even the few stools and tables we had left behind were untouched. The garden evidently appeared to have been unvisited, except by the birds and rats that had devoured the pumpkins, of which there seemed to have been an abundant crop.

9th. Remained at the Depôt. Several of the horses were shod to-day, and the different individuals of the party employed in various ways.

10th. Engaged in shoeing the remainder of the horses, and doing other necessary work. Finding, on inquiry, that we had now 3,025 lbs. of flour on hand, I this day granted to the men, in consideration of the toil and fatigue they had been subjected to in driving and walking across such a heavy country as we had lately been travelling over, an addition of 15 lbs. a week till we reach the Victoria. On starting from Sydney, the men joined with the expectation of riding the whole way, except when it came to their turn to drive the carts. At the Peel I found it necessary to add another cart to my equipment, and, from that place to our present camp, three men have been driving, and all of their own accord walking; the horses having been converted into pack-horses, in order to lighten the carts as much as possible, by which means our progress has been materially accelerated. I therefore considered this boon was justly due to them, more particularly as it was unsolicited, and I found from my stock of flour that I could very well grant it.

11th. Crossed the Maranoa, and proceeded, for a distance of 4 miles, along Sir T. Mitchell's track; but although the services of one black boy (Harry) and of every man of the party were put in requisition to endeavour to trace out the return route, our search was in vain; and finding the track we were on bending to the eastward of N., I quitted it, and steered N.N.W., by following which course I came upon the river running nearly E. and W., and encamped in lat. $26^{\circ} 7' 13''$ S.

12th. Crossed the river, and attempted to make Camp 32 by travelling N.N.W.; but at a distance of 6 miles we were met by a pine and brigalow scrub, which compelled us to change our course to N.W. and W.N.W. At 4 p.m. we crossed the river at the junction of a steep gully, and encamped in lat. $26^{\circ} 2' 30''$ S., at which point the river forms a sharp bend from the eastward to S.

13th. Halted, as usual, on this day (Sunday), and in the afternoon took a walk in search of Sir T. Mitchell's track, but without success.

14th. With an idea that we should encounter an ugly country, we started this morning for Possession Creek, and, at a distance of $1\frac{1}{2}$ miles, on a bearing of N., got into a dense brigalow scrub, through which the men had to cut a passage for the carts. Being a few yards in advance of the party, I climbed to the top of the highest tree I could find, and cast my eyes around in search of an open country, or at least an ordinary scrub, but in vain. With little satisfaction, I at length determined upon a direction, by keeping which we got clear of the scrub in a distance of about half a mile; here we fell in with Sir T. Mitchell's track, which we followed to Camp 32, where we arrived only at 3 p.m., so great had been our detention in making our way through the scrub. Two natives were seen to-day by the party; weather cloudy.

15th. Made another start for Camp 33 on Possession Creek. By keeping a N.N.W. course we had the good fortune to meet with ground as open and firm as it was the reverse yesterday, the forest consisting generally of acacia and box, with about 200 or 300 yards of a brigalow scrub. At about 7 miles we came upon the river to the westward of a northerly bend, where

Sir Thomas caught the last glimpse of it before turning westward to Possession Creek. Arrived at Camp 33 at 2 p.m. Error of Index found to-day to be 1° 45'.

16th. Following Sir T. Mitchell's track, we arrived at Camp 34, but found the bed of the creek dry. Having in vain searched for water above and below the marked tree, I determined on falling back to the river, and there leave the party in camp, while I reconnoitred the country to the westward in the direction of Camp 34 Creek; with this view I desired the men to return along the track, and rode on with Harry in search of water, expecting to find some in the river above the junction of the creek. I took a due E. course, but finding, after a ride of 8 miles, that I did not reach the river, but was following the general course of the creek, and it being now near sunset, I returned, and found the party had just encamped at a small water-hole, sufficient to supply our wants for the night. Our position was about a mile and a half to the eastward of Camp 34.

17th. Water in very small holes was found further down the creek. The quantity, however, being sufficient for the supply of the party for a week, I determined on making an excursion to the spot where Sir T. Mitchell marked "Smoke" in the supposed course of the Warrego. The day was therefore spent in making preparations for a week's absence from the camp; and I instructed Mr. Turner to follow Sir T. Mitchell's return track as far as Camp 37, and ascertain the state of that creek, and whether, if necessary, we could obtain a supply of water in that direction. Found the variation of the needle to be 9° 5' E., and our latitude 25° 49' 32" S.

18th. Leaving some written instructions for Mr. Turner's guidance during my absence, I started, taking with me Douglas, Luff, and Harry, on a bearing of 305° E. of N., intending to make the creek whence Sir T. Mitchell turned back on the 15th June. For 5 miles we traversed an open forest, consisting of pine and iron bark, when we were met by a dense scrub: at a distance of 8 miles the forest became more open. We crossed Sir T. Mitchell's track, running 35° E., and came upon a creek containing an abundance of water. After resting our horses for an hour, we proceeded on the same bearing, crossing the creek, which appeared to take a north-easterly direction, and, penetrating through a long, dense scrub, arrived at some fine flats, and, after a journey of 17 miles, reached a considerable creek running to the N.E., receiving, I imagine, the water from the flats crossed this afternoon, where we encamped.

19th. Continued our journey on the same bearing as yesterday, 305° E. For some miles our route lay through much the same description of country as we had traversed on the preceding day; but at a distance of 16 miles we reached the Downs of the Warrego, and at 21 miles encamped upon the creek in latitude 25° 29' 18" S. The Warrego intersects fine open Downs, and we found water at short distances in small holes, not to be depended upon in summer.

20th. Followed the river half a mile down on a south course; then crossed it, and ascended a range 7 miles to the westward of the camp, which enabled me to ascertain its position by a round of angles. On taking a view to the westward, I observed smoke in a deep valley about 3 miles, and apparently having a N.N.W. direction. Very extensive plains were observable on the horizon extending from S. to 235° E. of N. Returned to the Warrego, and encamped half a mile S. of W. of last night's bivouac.

21st. The valley observed yesterday, lying in the direction in which I wished to travel, I deemed it advisable to devote a day to the exploration of it. I accordingly started this morning on a bearing of 294°, in which direction there appeared to be an easy ascent to the dividing range. At a distance of 7 miles we brought the ridge laid down in lat. 25° 29" in Sir T. Mitchell's chart

to bear S., and, after having penetrated 4 or $4\frac{1}{2}$ miles of very dense scrub, we followed an open box flat to its junction with a deep sandy channel of a river, probably the Nive, and recognised as such by Douglas. We followed this river up in a N.N.W. direction for upwards of 9 miles, but did not meet with a single water-hole, and at length encamped without water in about lat. $25^{\circ} 20' S.$

22nd. Continued our journey up the left bank in search of water; and at 4 miles N.N.E. of our last night's camp we discovered a native well at the junction of a creek with the river, by clearing out which we obtained a plentiful supply of excellent water for ourselves and horses. Continued our search up the channel in a N.N.W. direction, and at a distance of 9 miles from our camp of the previous evening encamped in lat. $25^{\circ} 16' 10''$ at a deep though small water-hole, at the junction of a creek from the northward with the river, which latter bore N. of E. Climbed a tree on the top of a ridge, half a mile to the northward of our camp, and took the bearing of several hills; the one I concluded to be Mount Playfair bore 327° to 330° , distant about 8 miles.

23rd. Our camp of the 19th bearing S.S.E. from that of last night, I returned on that course this morning, keeping the river until I arrived at a plain, whence I hoped to obtain a clear passage over the range, but soon found a brigalow scrub, though not so dense as usual. We bored through it for a distance of 10 miles, and crossed the Warrego about a mile above the camp. I have traced the course of this river, or rather of the plains which it intersects, from two or three heights, and find that from lat. 25° to $25^{\circ} 29'$ they stretch to the eastward, returning to the same meridian, and at about $25^{\circ} 45'$ appear to take a westerly direction.

24th. It commenced raining about 12 o'clock last night, and continued almost without intermission during the day; and, as on my return to the camp I had to find a passage for the carts through a long scrub, I halted this day under the shelter of a piece of bark. Harry shot two ducks.

25th. A bitterly cold morning. Started at 8 A.M., and returning by our track crossed the plains in about 7 miles. At a distance of 10 miles I left the return track to my right, in the hope of escaping the thick pine scrub we had previously encountered, and partially succeeded. At 13 miles crossed our tracks on a flat, just at the entrance of another scrub, which we avoided by following the flat down; and at a distance of 2 miles fell in with them again, and kept them to our bivouac of the 18th, where we arrived at 3h. 20m. P.M.

26th. Returned to our camping-ground in lat. $25^{\circ} 49' 32'' S.$ near Camp 34; but found that Mr. Turner had proceeded with the party to the first water on Sir T. Mitchell's return-track, in accordance with my instructions to that effect, in the event of the water in the creek failing them. Followed their tracks, and found them encamped in lat. $25^{\circ} 44' 50'' S.$

27th. Remained in camp (Sunday). Obtained sight for time and lunar distances.

28th. Proceeded on a westerly course to my crossing-place in the creek of Camp 36, where we arrived about noon, having avoided the pine scrub which we fell in with on our route from Creek 34. Latitude of camp, $25^{\circ} 44' 14''$.

29th. Continued our journey along my horse tracks, and at 10h. 30m. A.M. arrived at the Badger Creek. Encamped at 1h. 35m. P.M. at the water-hole in the creek, at a distance of 9 miles from our last night's camp, in lat. $25^{\circ} 40' 15'' S.$

30th. Proceeded along the track for 4 miles, and then left it, to avoid a pine scrub; but failed in my attempt to find an open country. At a distance of 7 miles came upon a flat, which we followed up to its head; crossed the dividing range through a pine scrub. I followed my horses' tracks down a flat, falling towards the Warrego. At 4 P.M. encamped without water. As we had observed smoke in the valley to the northward of our camp on two occasions, I

fully expected to find water ; but after a personal search was unsuccessful. At 7 P.M. a native approached the camp with a "coo-ee," but made off as soon as he discovered who we were ; another proof that there must be water in the immediate neighbourhood.

July 1st. At 8 A.M. our party were in motion ; and at $2\frac{1}{2}$ miles we reached the downs of the Warrego ; after a journey of $10\frac{1}{2}$ miles encamped on the river at the point where I made it on my return from the Nive.

2nd. Having 2 days' journey to accomplish after leaving this, without water, we halted to-day on the Warrego. In the morning, I took a round of angles from the top of a hill, bearing true $16\frac{1}{2}$ E., distant 1070 yds. Obtained sights for variation at the same time ; found our latitude at noon to be $25^{\circ} 27' 2''$ S. ; var. $9^{\circ} 40'$ E. Two kangaroos were shot to-day ; one by Harry, and the other by Luff. These are the first we have observed on the journey.

3rd. Cut our way through a brigalow scrub on the top of the range which divides the Warrego from the Nive,* and encamped, after a journey of 11 miles, on a N.W. course, in a flat, by the side of a dry creek.

4th. Removed to the well on the Warrego, about 5 miles in a N.N.W. direction : 3 more wells were dug, from which we obtained an abundant supply of water. Latitude by observation $25^{\circ} 20' 7''$ S. Took a tracing of the head of the Victoria, and made preparations for an excursion in search of a practicable route for the carts to the Victoria. The thermometer this morning stood at 8° Fahrenheit after sunrise.

5th. Leaving instructions with Mr. Turner to proceed with the party to the water-hole I had found in a creek at its junction with the sandy bed of a river, I again took Douglas, Luff, and Harry with me, and started off to reconnoitre the country in the direction of the Victoria. As Douglas, who had accompanied Sir T. Mitchell on all his expeditions N. of Depôt 2, could not remember the bed of any river resembling the present, except the Nive, to which it was in all respects similar, and as I had crossed a well-watered creek intersecting plains at the position where I expected to fall in with the Warrego, I still thought this river might be the Nive, and accordingly followed it up. During the day it had taken several turns to the eastward ; but I encamped in lat. $25^{\circ} 6' 35''$ S., about N.N.W. of the dépôt, without water.

6th. As the course of the river this morning commenced with a sharp turn from the W., I still patiently followed it, in the hope of its preserving that course ; but during our progress I found that its longest reaches came more decidedly from the E. Much time was lost this morning in digging for water, our horses not having had any last night. As we proceeded the channel became more bold and rocky in appearance, indicating the vicinity of mountains ; and at length, after a journey of 10 miles, we obtained water by digging, in lat. $25^{\circ} 1' 30''$ S., our last night's camp bearing about S.W.

7th. As all hope had vanished of this river being the Nive, I ascended a mountain this morning, which bore by compass 103° from our camp, distant 3 miles. I found it lightly timbered, but steep and rocky ; evidently an extinct volcano, having its cavity open to the westward. Natives were encamped upon it, which led me to expect that I should find water in the neighbourhood ; but although unsuccessful in my search, I have little doubt there is some. The weather being showery I was unable to obtain a round of angles, but observed Mounts Playfair, Pluto, and Hutton, the former bearing $259^{\circ} 40'$ by compass, distant 15 miles. Coming again upon the sandy bed of the river at the Mount, I traced it round to the spot where we had encamped, and, in doing so, came upon the tracks of horses and bullocks, confirming what my angles had shown

* This river was afterwards found to be the Warrego, and what I had supposed to be the Warrego, an unnamed creek.—E. B. K.

me, that we were upon the Warrego. Found several native camps along the banks of the river.

8th. Travelled on a bearing of 255° , in order to pass S. of Mount Playfair. At 12 miles passed a well-watered creek, running S.S.W., and encountered a brigalow scrub on the S. spur of the Mount. Encamped $1\frac{1}{2}$ mile from its summit, the bearing 32° . Our camp was on a gully, containing water in shallow holes, evidently the effects of the late rains.

9th. It rained heavily during the night; but this morning I continued my journey, on a bearing of 305° , so as to cross the dividing range and come upon the source of the Nive. In $\frac{1}{2}$ hour we had passed through a brigalow spur on the side of the gully, in which we had encamped, and came upon an open forest-country. Crossed the Crino in an open flat, containing a marked water-course, but with no water, where we passed. Encamped on a creek in lat. $25^\circ 2' 19''$.

10th. Continued our journey, and at a distance of 3 miles came upon the rocky brigalow scrub of Sir T. Mitchell: found the ascent rocky and impassable for carts. Picking our way along the top, which was covered with pines and dead timber, we followed down a water-course (the Nive), and encamped at a water-hole at the junction of the Nivelle.

11th. Rode to the brigalow creek, containing water, at its junction with the Nive, distant 7 miles W. of the Nivelle; watered the horses and took my departure for the Gap, on a bearing of 325° . At a distance of 5 miles, found the fall still to the northward and eastward, and therefore kept more in a westerly direction, in the expectation of falling in with a water-course which would lead me to Happy Valley. Ascending a remarkably isolated portion of a ridge which lay in our route, I observed forest-land extending for many miles in a north-westerly direction. Immediately to the northward of the hill was an open flat, through which the creek ran; and although from the distance we had travelled, and the appearance of the country, it was evident I had passed the Gap, I encamped in this flat, there being a good supply both of grass and water. I had just selected a site for our camp, when a hearty laugh made us aware that we were in the neighbourhood of a party of natives; and wishing to ascertain their numbers, I fired a shot; on hearing which they removed to a distance of about $\frac{1}{2}$ mile. Lat. $24^\circ 49' 30''$ S.

12th. Concluding that Happy Valley must be about 4 miles W.S.W. of us, and cut off by a high brigalow range, I followed the flat down this morning for about 1 mile, and thus gained the summit of the range. Traced our way along the top to the S.W. till we came in sight of the plains at the Gap with Happy Valley to the southward. Took a sketch and bearing of the limits of the plains; passed Camp 72, and returned to the Brigalow Creek on the Nive. The flat on which we encamped last night appears well watered; and from its character and north-westerly direction the creek evidently flows into the Victoria.

13th. With the view of avoiding the rocky brigalow ridges at the head of the Nive, I started on a bearing of 125° for my camp, in lat. $25^\circ 2' 19''$. For the first 7 miles we encountered a good deal of brigalow, and here entered an open forest-country, consisting of box and iron bark. At 10 miles crossed a creek with a southerly direction, with no water in it; and a little farther on came upon another with a westerly course, joining the first. This I followed up, as it gave me an open passage through a scrubby and broken country, in an E.S.E. direction. At 13 miles came upon open forest-land; and at 15, the black boy's horse being knocked up, we encamped, without water, at the head of some rocky gullies concentrating at the head of the Nive.

14th. Continued my course of 125° , and, after passing through an open brigalow scrub for a distance of 3 or $3\frac{1}{2}$ miles, arrived at a creek containing an abundant supply of water. Here we rested our horses for a couple of hours,

and again proceeded through brigalow to my camp, in lat. $25^{\circ} 2' 19''$, having discovered a comparatively clear road for the carts to the Nivelle, escaping the rocky ridges. We should have reached Mount Playfair to-day, had it not been for Harry's horse, which was completely knocked up.

15th. Returned on my track to Mount Playfair, avoiding the pine and brigalow scrubs. About noon it commenced raining, which prevented my getting beyond my camp of the 8th.

16th. Started on a bearing of 180° for the camp on the Warrego, where I had left my party. At a distance of $1\frac{1}{2}$ miles crossed a creek running to the S., with an abundance of water in it; and about a mile farther on crossed the one at which we had watered our horses on the 8th. At 7 miles encountered a brigalow scrub, which threw me off my course to the eastward. At 11 miles made the Warrego; and at 4 P.M. reached the carts; found all well at the camp. The natives had paid them a visit about 2 A.M., but finding the men on the alert had taken themselves off again.

17th. Took observations for variation on a hill N.E. of camp, distant 400 yards; and also took the bearing of Mount Playfair from the same spot. The variation I found to be $10^{\circ} 14' E.$ Removed the camp to a water-hole on the Warrego, in lat. $25^{\circ} 11' 46''$. Observed the distance between C and Antares. The water at this and at the last camps may, I think, be called permanent, consisting of deep holes in sand, at the junction of small creeks with the river from the eastward. The true bearing of Mount Playfair from the hill, near the last camp, is $335^{\circ} 49'$; the magnetic bearing of the centre from the bank opposite to this is 313° .

18th. Remained in camp; received vouchers for 26 birds collected by Wall during my absence, making the total number of birds collected up to this date 53, and of animals 7. Observed the distance between sun and moon, and obtained sights for time; plotted my late route, &c.

19th. Proceeded towards my camp, S. of Mount Playfair, in a N.N.W. direction. At a distance of 2 miles came upon my return tracks, which we followed for some time, and then quitted them, keeping more to the westward, to pass through what appeared to be the most open country. Having succeeded in avoiding much of the brigalow scrub seen on my return, we passed through a short but thick casuarina scrub. I again got upon my return tracks, when we kept a course of 310° to a creek falling to the southward and westward, in lat. $25^{\circ} 7' 8''$.

We found the bed of this creek so soft that it became necessary to tether the horses: water boiled repeatedly at 210° ; thermometer 38° and 44° .

20th. Moved along my return tracks in a W.N.W. direction. At 2 miles passed my bivouac of the 8th, and, crossing a brigalow ridge, came upon an open sandy forest, which we traversed for 5 miles, when we encountered a dense brigalow scrub, through which we had to cut our way. Followed my return-tracks to a creek flowing S.W., in lat. $25^{\circ} 1' 47''$, about $1\frac{1}{4}$ miles S.S.E. of the brigalow ridge mentioned in my instructions. Reached our camping-ground at sunset.

21st. We were detained this morning until $\frac{1}{2}$ past 10 o'clock by Douglas, who lost his way in the brigalow while looking for the horses. Started for the Nivelle and Nive, and at $1\frac{1}{2}$ miles crossed the brigalow ridge, at about $\frac{3}{4}$ mile S. from the place where Sir T. Mitchell crossed it. On attaining the top of the ridge we kept along the upper part of the fall to the Nive, in as northerly a direction as the absence of scrub would admit of. At 8 miles we touched upon my tracks of the 10th; and being now sure that we were clear of scrub, I kept a north-westerly course, until we reached the junction of the Nivelle. The latitude obtained from the double altitude of Arcturus is $24^{\circ} 58' 30''$; the same as charted by Sir T. Mitchell, from an observation of a south star, $24^{\circ} 54' 40''$.

22nd. Proceeded on a W.S.W. course this morning to the water in Bri-
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galow Creek, where we encamped at 11h. 30m. At sunrise this morning the thermometer (Fahrenheit) stood at 25° , and at noon 72° . A strong wind all day from the westward, with hot blasts.

23rd. Made a start for Happy Valley, and, with the view of avoiding the scrub we had experienced on two previous occasions, we travelled down the Nive for 2 miles before striking off for the Gap. We did not succeed, however, in effecting our object; for we had to cut our way through a dense brigalow scrub, and did not reach the valley till 4 P.M. It has taken us 6 weeks to attain this point from Camp 29; but my horses were recruiting their strength 3 weeks of that time, while I was absent reconnoitring, and were consequently then, with the exception of three or four, in excellent condition. Not being able to afford flour, a mess of sago was given to the men to commemorate our arrival on the Victoria.

24th. Followed down the water-course, at present containing water in every hole. At $4\frac{1}{2}$ miles got upon the magnificent plains of the Victoria, and, guided by Sir T. Mitchell's survey, I was enabled to cut off all bends, and preserve a westerly course, until we touched upon the river, about a mile S.E. of the first creek laid down by Sir T. Mitchell, as coming from the N., and $9\frac{1}{2}$ miles from Happy Valley. This is undoubtedly the finest country I have seen in Australia, the splendid reaches of water in every bend of the river, and the exquisitely green plains, presenting a delightful appearance. The country abounds, too, in every species of game; emus, turkeys, cockatoos, &c., surrounding us in all directions during our progress. The latitude is $24^{\circ} 52' 55''$. Water boiled at $211\frac{1}{2}$. Thermometers (Fahrenheit) in the shade, 44° and 42° .

25th. Remained in camp.

26th. Keeping a westerly course, we crossed the creek of Sir T. Mitchell's first camp from the valley, and at 10 miles encamped $\frac{1}{2}$ mile E. of the next creek, from the S. near the spot marked on the map "Acacia Pendula;" lat. $24^{\circ} 52' 52''$; a well watered spot. Observed the distance between mg Virginis and ζ , and obtained sights for time. My watch $38' 58''$ too fast. Seventeen emus were seen in one flock to-day.

27th. Crossed the river, and travelled down its right bank; did not change my bearing all day, and encamped close to the river, after a journey of $9\frac{1}{2}$ miles. The channel of the river here is much divided, and the water is in scattered holes; and I think it very doubtful whether we should find any in a dry season. Lat. $24^{\circ} 45' 10''$.

28th. Continued our journey across plains with long strips of scrub in some places; our course was generally W.N.W. At 10 miles came upon the river where it takes a sudden turn to the northward, and at $11\frac{1}{2}$ miles encamped upon its banks. Our course to-day was pretty straight, and although we passed many dense scrubs and much Acacia forest, our road was generally clear. We did not cross the river, but travelled down its left bank (if such it can be called, having no well marked bed but divided channels). Worked my lunar of the 26th instant, which places my camp of that evening in long. $145^{\circ} 56' 45''$ E. and lat. $24^{\circ} 52' 52''$ S.; this position is 28 miles W. of that given by Sir T. Mitchell.

29th. Travelled over downs in a N.W. direction to avoid the bend which the river here takes to the northward. At about 5 miles touched on its south angle, and then kept a westerly course for 6 miles, and encamped upon the fine reach laid down by Sir T. Mitchell. I imagine the river must have received between this and the last evening's camp some considerable tributary from the direction of Mount Northampton, for the character of its bed is quite changed: instead of clay holes, it has a broad gravelly channel with reeds and long reaches of water. Lat. $24^{\circ} 37' 10''$ S., and about 3 miles E. of Sir T. Mitchell's camp.

30th. Continued our journey along the plains S. of the river in a W.N.W.

direction for 9 or 10 miles, when the northern hill of Mount Enniskillen bore S.E. ; we then turned more to the northward, through brigalow, to find the river, and at about a quarter of a mile reached it, but here it divided into a number of small dry channels. At about 15 miles in a westerly direction we encamped on the S. bank of the river, which is in this place little else than a broad sheet of sand ; obtained water in small holes on the N. side, as well as in a creek three quarters of a mile S.W. of the camp.

31st. Proceeded in a N.W. direction for 7m. over plains ; at that distance we came upon the river, but so cut up into small dry creeks or watercourses, that I was at a loss which to consider the main channel ; keeping between several of them we encamped at 10 miles on a plain bordering on what I believed to be the principal channel, where there was a long hole containing very old water. The appearance of the country is parched and arid, and it seems to have suffered much from drought.

August 1st. Remained in camp. In looking for the horses this morning the men discovered water in several holes in the neighbourhood, so that there will be no want of a supply on our return ; on examining the contents of the carts I find we should have but 1343 lbs. to carry on each horse, were we to leave the carts behind ; and as the season is far advanced and I am anxious to make as much progress as possible in carrying out my instructions within the tropics, I have decided on burying them and anything else we can dispense with, so soon as I can find a suitable spot. Natives were seen to-day in a brigalow scrub by the men in search of the horses.

2nd. After rounding an angle of the river we travelled over plains in a N.W. direction for 5 miles, then crossed it and traversed another plain in a N.W. and W. direction. At 12 miles kept a W. course towards the river, and encamped on its N. bank in lat. $24^{\circ} 20' 59''$ S. The evening was cloudy, with every appearance of rain, but at 9 P.M. it cleared up ; there was a waterhole in the river where we crossed it, and several where we encamped.

3rd. Finding by this morning's observation that we were in the latitude of Sir T. Mitchell's camp of the 28th of September I sent Douglas and the black boy down the river to try and find out his camping ground. At a distance of 250 yards they came upon horse tracks approaching the river from the northward, which I afterwards examined, and as no other traces were discernible I imagine they must have been upon the site. Wishing to trace the southernmost channel laid down by Sir T. Mitchell I crossed the river, and kept along it for about 5 miles in a W.N.W. direction, but at that distance the scrub became so thick I was compelled to travel again along the N. side and encamped in lat. $24^{\circ} 17' 36''$.

4th. Kept a westerly course over plains of a dry cracked clay, upon which were scattered a few stunted trees ; their general height being about 24 feet ; had a creek in sight of us to the right all day, and finding at 10 miles that a scrub intercepted us and the branch we had left, we turned to the northward, and at a quarter of a mile came upon the creek which had been running parallel with us. There was no water where we made it, but having found some a short distance up, we encamped in lat. $24^{\circ} 15' 30''$ S. Variation of compass $6^{\circ} 56' E.$ The appearance of the country travelled over to-day was parched, the plains in some places being destitute of all vegetation, and they are, or have been, subject to inundation, as is evident from the numerous shells and muscles to be found in all parts of them ; the various channels into which the Victoria is divided in this portion of its course, bear evident marks of the country having suffered from a long drought ; water is excessively scarce, and many deep holes are now dry.

5th. Conceiving myself to be now at that point of the Victoria at which it makes a circuitous turn from the northward, or, in other words, at the eastern extremity of the bend alluded to in my instructions, and considering from the

great scarcity of water, and consequently of game, that this would be a favourable spot for burying the carts and such other portion of our equipment as we could dispense with, I instructed Mr. Turner to have 6 months' tea and 4½ months' sugar packed in bags for the greater facility of carrying on pack, and to make the other necessary arrangements. With this view I also set the blacksmith to work to furnish each horse with a good set of shoes, which, with a spare set, will, it is anticipated, carry them to the Gulf and back again without injury. The men were instructed to make a search up the creek for water, and also to look out for a sandy piece of ground; whilst, taking Douglas and the black boy with me, I rode in a northerly direction in the hope of recognizing one of Sir T. Mitchell's camps; in this I was unsuccessful, but found that we were encamped upon the northernmost branch of the river, although upon the southern channel of that branch, which here consists of 3 or 4 distinct channels. On my way back to the camp, I selected a spot for burying the carts. I this evening read Leichhardt's lecture, by which I find that there is a probability of our meeting, and that it is his intention to run the Albert up to its source, which is, I hope, in this part of the country. I saw to-day two of the largest kangaroos I ever met with: they were of a yellowish red colour (very similar to that of the native dog), with black faces, and their height when sitting up could not have been less than 7 feet.

6th. The men commenced digging a pit for the carts this morning, but, at the depth of a foot, the soil became so hard, that it was evident they would be unable to sink it the required depth under 3 or 4 days, which time we could not well spare; I, accordingly, selected a more sandy spot, about 250 yards E. of our camp, and 4 men were busily engaged during the day in excavating it, but, on visiting the hole in the evening, I found that at 2 feet from the surface the ground became too hard for the spades, and that our pick-axes would have to be put in requisition; the soil continued sandy, mixed with quartz pebbles; our water was fast falling or evaporating under a temperature of 96° in the shade, and this being a case of necessity I determined upon joining the men in the morning (Mr. Turner being too unwell to admit of his working), with the hope of getting the hole ready by the following evening.

7th. All hands employed in sinking the pit, which was required to be 24 feet long by 11 broad, and 6 deep; worked hard all day, and at sunset had the gratification of seeing it ready to receive the carts.

8th. Buried the carts with the harness, spare trappings, &c., 270 lbs. of sugar, and a sufficient proportion of tea. At 11 A.M., when the pit was nearly filled in, Harry came running to us with the intelligence that the natives were in pursuit of our horses. Having no arms on the spot I despatched two men to the camp for some, but, before doing so, directed the whole party to give a loud shout, which had the desired effect of causing them to desist from their pursuit, and imagining from our voices that we were a large party (the dust raised by the galloping of the horses having concealed us from their view), they thought proper after a time to retire. In the evening the pit was well covered in and trampled upon, whilst Harry rode round the edge of the scrub to guard against our being watched. We were obliged to keep the horses on tether all night.

9th. The loads being new to the men, we did not finally leave our encampment until noon. Kept a S. 86° W. course as near as possible over soft acacia plains, occasionally diverging a little to avoid the scrub. At 4 miles encamped upon the S. branch of the river, where we found abundance of water, but a very scanty supply of grass. Mr. Turner still continued unwell, and another of the party, Luff, complained this morning of a disordered stomach. Latitude by observation 24° 14' 44" S. This branch of the river is here divided into 6 channels; the centre one I should say is seldom dry.

10th. Continued the same course as well as the scrub would permit. The

country travelled over to-day was undulating, of a soft crumbly soil, with here and there open downs interspersed with acacia and rosewood scrubs. From the appearance of the downs, which are strewed with dead timber, and from their being in many places covered with pebbles and fossil wood, it is evident that at some time or another they must have formed one vast scrub. At 12 miles we encamped upon the river from the southward, as laid down by Sir Thomas Mitchell, and found abundance of water; the river, from all appearance, having only lately ceased to flow; its channel is rocky, and the rocks are of a very hard and close-grained sandstone.

11th. Proceeded on our journey in a westerly direction, over a very similar country to that travelled over yesterday, although for the first 8 miles the scrubs were more frequent and longer, but at the same time comparatively open. At 8 miles we crossed a shallow creek falling to the northward, and, at 13 miles crossed a still smaller one with a similar direction, when we came upon open downs covered by the most luxuriant pasture. At 18 miles, having been induced to travel thus far by the fine appearance of the country, we encamped without water on the W. side of an extensive plain; the open passages of ground between the scrubs, seen during the last few days, resembled the cleared ground on the Hunter, where the trees have been killed by stripping them of their bark; from the quantity of dead timber strewn over the ground, it would appear that the scrubs are fast decaying, and their place supplied by plains. At present these newly made plains are of a light and poor description of soil, but as the dead timber disappears the soil improves, from which I think we may infer that they undergo a change for the better, as the absence of wood marks the greater age of the plain. We heard the Gluck Gluck bird spoken of by Leichhardt, seen by Sir Thomas Mitchell's party, for the first time to-day since leaving the Maranoa, where on this journey I only heard it once.

12th. Considering the variation to be 7° E. we kept a westerly course; the clumps of scrub were smaller, and not so dense, as those seen yesterday, and the plains were covered with a most luxuriant vegetation. At $8\frac{1}{2}$ miles we came upon the downs near Yaranigh Lagoons, the chain of which lagoons we crossed shortly after, and found them dry. At 10 miles entered a stony forest scrub, but, finding it too rough for the horses, altered our course a little to the northward, and again came upon the dry chain of lagoons. Riding along the S. side in a westerly direction we found horse-dung, but not being able to discover any tracks, and Douglas not recognizing the spot which is here a dry marsh, running E. and W., we proceeded upon a W.N.W. course to the river, where we encamped; and, singular enough, close to the camp, and about $\frac{4}{5}$ of a mile from the spot where we first saw horse-dung, more was found; for the latter I am quite unable to account, as Sir Thos. Mitchell crossed the river opposite to a scrub, and kept wide of it, until he encamped upon the 28th of September. Here the banks of the river are clear, and it has several deep channels, in the two southernmost of which a flood appears to have lately taken place. Lat. $24^{\circ} 16' 33''$ S.

13th. Followed the course of the river for 3 miles, and crossed it about the same spot as Sir T. Mitchell did, on his return. Kept a westerly course over the most beautiful downs, with here and there a clump of silver-leaf brigalow; the country about here appears to be clad in gold, so thickly is it covered with butter-cups, and other spring flowers. After travelling 10 miles, we arrived at a creek running S.S.W. to join the main river; and as a brigalow scrub confined it on the W. we ran it down, and at 2 miles reached the river, running in a south-westerly direction, and here divided into 3 channels. Latitude $24^{\circ} 17' 34''$. We encamped upon the middle channel; all three contained water, but the southernmost one was the deepest, and, at its junction with this, about a mile below our camp, there is a fine deep reach.

14th. Proceeded upon our journey, keeping within sight of the northern-

most channel, with a view of travelling as little to the southward as possible, and meeting the S. channel W. of the bend which it appeared to take in a southerly direction. At the distance of a mile, we crossed two deep lagoons, but one of which only contained water, and that apparently not to be depended upon. At about 4 miles came upon the north-western channel at a deep though small reach, and, crossing just below it, rode to a sand-hill which approached close to the river, and seemed to be the north-western boundary of these waters. From the hill the top of a ridge running N. and S. was discernible at a distance of about $2\frac{1}{2}$ miles, confining these waters on the E. and S. side; at $9\frac{1}{2}$ miles we encamped on what I considered to be the centre channel in lat. $24^{\circ} 24' 47''$ S.

15th. Impatient to examine the opposite limit of this most extraordinary valley I left the camp at daybreak with the black boy (Harry), and kept an E.S.E. course towards the highest part of the low range. We crossed the range, which these waters intersect, at $3\frac{1}{2}$ miles, and then ascended a scrubby ridge strewed with rounded pebbles formed of a very hard rock. We penetrated the scrub on rising ground until I thought that we had attained the highest point of the ridge, although the bush was too thick to afford me a good view. This low range appeared to extend parallel to others of the same description, which are connected with it in the direction of N.N.E. and S.S.W. In vain did I look for high land to the southward, or some indication of a change in the course of the valley. The fall was most provokingly evident to the southward. I should mention that, between the camp and this ridge, there are three water-courses, all containing water, but so shallow that it is evident the channel upon which we are encamped is the main one. Harry observed several plants during yesterday's journey, which belong more properly to salt lakes. I thought it worth while, on my return to the camp, to reperuse the account of Captain Sturt's expedition, published in the 'South Australian Gazette,' and the result is, that I am convinced that we are now upon Cooper's Creek, described by the natives as having its source, or rather as being divided into many branches, above where they were. The river has been making directly for the point where Captain Sturt turned back on Cooper's Creek, ever since it was turned in its northerly course by Sir T. Mitchell.

16th. With some anxiety lest I should follow this treacherous river too far S. to enable me to carry out the second duty imposed upon me, namely, that of finding a practicable route to the Gulf of Carpentaria, I continued my journey down it, still considering it possible it might take a favourable turn, and that the broken range to the southward and eastward might once be the barrier between Sturt's desert and this, and give rise to Cooper's Creek. At $1\frac{1}{2}$ miles passed a fine reach of water, and at 2 miles passed a lagoon on the right, situated under a low brigalow ridge in the centre of a pretty flat. Keeping the eastern channel of the river on our right, we traversed open plains with here and there a clump of brigalow. At 7 miles sighted two remarkable and isolated hills bearing about S.E., and the point of a brigalow ridge N.W., distant $2\frac{1}{2}$ miles. At 10 miles touched upon the river, here divided into a number of shallow and dry channels, bounded on the W. by the stony brigalow ridge, of the northern extremity of which I had taken a bearing. Scarcely crediting that the river could have thus dwindled away, I left the party on the eastern bank, and rode through the scrub on the ridge, for the purpose of ascertaining if it concealed from view the main channel, but, not satisfied with my search, I sent a man to the point of the ridge, to see if he could discover any traces of it in a north-westerly direction. At 12 miles we encamped between two of its principal channels. The man I had despatched to the ridge returned at sunset, and reported that he had found high ground on the W. bank above where the ridge confines the river, lat. $24^{\circ} 33' 49''$ S.; the course of the river to-day has been about 15° W. of S.

17th. Travelled down the river over a very thinly wooded country; the soil

is a poor white clay, but there is no want of grass, although during the last 3 days it has appeared withered and parched up. We kept between two of the principal channels during the greater part of the day, but, in the afternoon, crossed them and reached a brigalow ridge, which bounds them on the western side. Being satisfied as to which was the principal channel, we turned towards it, and encamped at 13 miles in lat. $24^{\circ} 43' 40''$. The river's course to-day was about S.S.W.

18th. Pursued our journey down the river over a lightly-timbered country, bounded on either side by low brigalow ridges alternately abutting on the E. and W. side of the main channel. The plains had at one time been inundated, and are strewed with spiral shells. These are also intersected by dry beds of small lakes and lagoons; and another remarkable feature is the total absence of trees of any size, except on the banks of a water-course or dry lagoon. We encamped this evening on a small water-hole in the river, which is here split into countless channels.

19th. The course of the river having kept so steadily to the S.S.W., and it being here so divided in its channels, I, last evening, came to the resolution of not taking my party any further down it, "the principal object of the journey (in the words of my instruction) being the determination of the course of the Victoria, and a convenient route to the head of the Gulf of Carpentaria;" I, nevertheless, felt that I could not leave the river untraced in any latitude N. of 26° ; but to attain that point with my party, and afterwards proceed to the gulf, was an impossibility with my stock of provisions, which consisted of somewhat less than 7 months' consumption, at an allowance of 75 lbs. of flour per week: I therefore propose tracing it down to that latitude (26°) with two men, when, if it preserves its present course, I shall be within 2 days' ride of Sturt's position on Cooper's Creek, and will then leave the river and make directly towards it. On attaining that point, I hope the Government will consider that I have carried out the first part of my instructions, and satisfactorily determined the course of the Victoria. It is then my intention to proceed to the N.W. angle of the river traced by Sir T. Mitchell, and search to the N.W. of that position for a river leading to the northward. Obtained a set of equal altitudes, also sights for time by single altitude; took the distance between ☽ and ☽ and Fomalhaut, and obtained the latitude by north and south stars, $24^{\circ} 52' 51''$.

20th. Left the camp at sunrise with Douglas, Luff, and Harry. At 12 miles halted and had breakfast. In that distance we passed 3 native camps, observable by the smoke of their fires. From the last one 3 or 4 men came out and shouted after us, but they were at too great a distance to admit of my speaking to them, although I was desirous to do so. Before we left the spot where we breakfasted, 3 came up, armed with their spears and nulla nullas, but were so shy that it was a long while before we could get near enough to converse. We exchanged presents, and they appeared to understand our questions as to the course of the river, for they made a sweep with their hands in a southerly direction. They were about 5 feet 7 inches in height, were only scarred across the chest, and all three were deficient in a front tooth. They carried green boughs as emblems of peace, and, as they approached, threw their spears behind them, to show that they were friendly; but it was only when I had taken up a stick and gone through the same ceremony that they would allow me to come near them: they, however, picked up their weapons and held them during the interview. Continuing our ride in a S.S.W. direction, I found, towards sunset, that I must change my course to W.S.W. in order to make the river; and, after a journey of 25 miles, encamped upon a reach of water. This is the first day that the course of the river has taken a direction to the westward of S.S.W. for any length.

21st. Continued my ride down the proper left bank of the river; crossed it

just above where a steep red mount at the north-western extremity of a range abuts on its S. bank; the river here maintains a course 60° W. of S. At 10 miles turned towards the river, and found a reach of water in its channel upwards of 120 yards in width; keeping near the bank in about a quarter of a mile we reached the end of the reach at a point where the eastern bank is strewn with rocks and pebbles, and into which the back water from the river has made considerable inroads. Below this I found the bed of the river dry, and crossed it, expecting to find another channel falling more to the southward, for I could scarcely credit the sudden and rapid change in the appearance of the river. Finding no other, I turned towards the channel I had crossed, and, at 18 miles, re-crossed the river, here dry and divided into several channels, and encamped in lat. $23^{\circ} 11' 51''$. By the unexpected westerly turn of the river I found myself in the evening $48'$ N. of the position I had intended to make, and would have made in 3 days, had the river continued its usual course. I felt much at a loss how to act, for this change extending perhaps for a very short distance, left in doubt that which it was one of the principal objects of my journey to determine. On second thought, however, I decided on proceeding, as it was still possible that the river might disembogue in the gulf, although the chances are against it, the only one, indeed, in favour of such a supposition being the rocky nature of its southern bank.

22nd. Before sunrise we were in the saddle, travelling down the right bank of the river. At about a quarter of a mile it took a turn to the northward of W., and was winding through rocky plains, or, more properly speaking, had made a channel through a rocky ridge slightly elevated above the plains; this appeared to me to be the spot likely to determine the course of the river. The range which had abutted on the river to the S. a few miles higher up had receded, but its influence was clearly not yet lost; plains extended on both sides, except on its immediate banks, which, as I have already said, were of a rocky character. The river pursued its westerly course for about 3 miles, when a reach, which had commenced near our last night's encampment, opened out into a fine sheet of water, from 100 to 120 yards wide, with rocky fords similar to those on the Balonne. At 7 miles the river took a short turn to the N.W., and then, as far as I followed, W. by N., inclining to the northward. At 10 miles the reach of water still continued; it was here 145 yards wide, and apparently very deep; it intersected open plains with fair pasture, but with an extremely poor, white, clay soil.

23rd. On a bearing of N. 70° E. I returned towards the camp, feeling perfectly satisfied that it was my duty to follow such a river whatever direction it might take. At $4\frac{1}{2}$ miles I changed my course to N. 60° E., and at 16 miles encamped on the river, having cut off the long bend it takes to the southward.

24th. Reached the camp at sunset, and had the pleasure of finding everything as I had left it.

25th. Conducted the party 13 miles down the river, and encamped on a fine sheet of water; the day was cloudy with a strong wind from the northward; distant thunder was heard in the evening, and rain appeared to fall in the direction of the S.W.

26th. Proceeded on our journey at a quicker pace than usual, in consequence of all the men but two being now mounted. At $12\frac{1}{2}$ miles crossed the river, and, following it down on the right bank, encamped on a noble sheet of water, after a journey of 14 miles. A few jew-fish were caught this afternoon, lighter in colour and longer than those found in the Balonne; we also caught another kind of fish resembling bream, but with a different head.

27th. Followed my tracks, cutting off the southern bend of the river, and encamped on the 10 mile reach, after a journey of 15 miles.

28th. Again got upon my tracks and followed them to where I had last encamped. The river is here 120 to 140 yards wide, with rocky islands; at

a mile below the place where we encamped there is a rocky ford, at which a party of natives had taken up their quarters on my former visit, and where they remained, notwithstanding our vicinity.

29th. Remained in camp and worked the lunars of the 18th instant, by which I made the long. of that camp $144^{\circ} 19' E.$, and the lat. $24^{\circ} 52' 51'' S.$

30th. In the hope that the river was taking a favourable turn to the northward, we started this morning on a westerly course. At 9 miles we neared it, but, at 14, left it some distance to our left, and came upon a considerable river from the N.N.E., with a broad bed and a continuous reach of water about 50 yards across, upon which we encamped, after a journey of 15 miles, in lat. $25^{\circ} 9' 13''$. The last 11 miles of this day's journey had been over a dead flat or plain, subject to inundation; it consists of a white clay, blistered and cracked, and totally devoid of vegetation; this apparently dry bed of a lake or sea is bounded on the N. side by low, red, sandy dunes, and over it are scattered a few dwarf trees of from 6 to 20 feet in height, which appear to have suffered from a long drought: it seems a pity so much water should intersect so worthless a country. I could not help observing this evening how very few birds were visible in the neighbourhood of our encampment; 2 or 3 crows or ducks were all that were to be seen.

31st. Proceeded on our journey; crossed the new river at its junction with an inferior branch of the Victoria, and for about 10 miles kept a course 5° to the northward of W. At that distance I found myself on some irregular sandy elevations, the river not in sight, and a low ridge, extending nearly N. and S., in front of me. I then changed my course to S. $15^{\circ} W.$ for $2\frac{1}{2}$ miles, and, not finding the river, kept due S. for the same distance, then S. $15^{\circ} E.$, and lastly S. $70^{\circ} E.$, until I made the river across a plain in $3\frac{1}{2}$ miles, and encamped at 7h. 30m. p.m. on its right bank. The greater part of this day's journey has been over extensive plains intersected by deep fissures and cracks, bare of all vegetation, and of a loose crumbling soil.

September 1st. Continued to trace the main channel of the river through a most dreary desert. At 5 miles the low ridge or range that I sighted in the W. yesterday morning closed in upon the river. It is stony, and covered with a brigalow scrub. The rocks rendered it difficult to travel on the right bank; but, lest the river should discharge any of its waters to the northward unobserved, we advanced slowly over them. Lat. $25^{\circ} 24' 48'' S.$; long., from mean of two observations of \odot and \mathbb{C} , and Saturn and Moon, $142^{\circ} 58' 45'' E.$

2nd. At the distance of about $\frac{1}{2}$ a mile from our last night's camp the stony ridge closed in again upon the river, which here divided into a number of minor channels. Selecting the westernmost one, I traced it for 8 miles; but finding the channel dry, and traversing a desert without any signs of vegetation, I turned to the S.E. and E., and at 4 miles, having crossed a number of dry channels, we encamped, at 7 p.m., on the principal one, here reduced to a few shallow pools. In travelling down the western channel, our party was approached by a number of natives unarmed; they were a fine race of men, little scarred, and wanting *two front teeth*. We made them presents, and they accompanied us, until we turned to the eastward, which movement appeared to cause them great uneasiness, for they began to coo-ee and talk very loud, evidently desiring us not to go that way. Knowing that the main channel was to my left, I concluded that their camp must be in that direction, and that they were afraid of our approaching it; and, consequently, paying no attention to them, I turned my horse, as if to gallop at them, when they took their departure. On crossing the dry channels, however, we observed several deserted huts on their banks; and I am now inclined to think that their intentions were friendly, and that, knowing that we should not find water for some distance in the course we were pursuing, they intended to con-

duct us to some hole near their camp. This makes the fourth night that our horses have been obliged to go without grass, for not a blade is visible in any direction.

3rd. This morning, before starting, we had a visit from a party of the young men and boys belonging to the tribe we met yesterday; they appeared, generally speaking, to be an open-hearted, good-looking set; and, as their visit was evidently dictated by curiosity, we treated them kindly, and made them presents. They accompanied us for some distance on our journey, the boys laughing immoderately at the movements of the horses, and at about 2 miles quitted us, and we saw no more of them. At 8 miles I sent Luff to look into the channel, on which the natives were encamped, distant about $\frac{3}{4}$ of a mile. He found a little water, but no grass; and we therefore turned more to the eastward, and, crossing the main channel—here more than ever cut up and divided—we encamped upon a small water-hole, which we succeeded in finding, after great difficulty. As we were now within a fortnight's journey of Cooper's Creek, I had 400 lbs. of flour and 70 lbs. of sugar buried, in order to mount all the men and lighten the horses as much as possible. Lat. $25^{\circ} 43' 44''$.

4th. Continued our journey over much the same description of country as we had been travelling over for the last few days.

5th. Remained in camp, and buried 270 lbs. of flour.

6th. Scarcely knowing which to consider the main channel, we pursued a westerly course, with the view of keeping the river between us and the range to the eastward. At 3 miles we crossed an infinite number of channels, and we then resumed a south-westerly direction. At 5 miles touched upon the river below the junction of several of the creeks, and where there is a standing reach of water. At 11 miles came again upon the river, and here it was divided into a number of channels; but in one of them some small, but, I think, constant, holes of water were found. Encamped in lat. $25^{\circ} 54' 15''$. The country travelled over to-day bore much the same aspect as the other portion of the desert through which we had passed; it was wholly destitute of vegetation, but we were fortunate in finding a few tufts of grass in the creek near the camp, which afforded our horses a scanty meal.

7th. Following the main channel of the river, we encamped, after a journey of 8 miles, at two very small water-holes, without food for our horses. The ground travelled over to-day was worse than ever, the horses falling up to their knees at every step. The channels of the river have become very small, and scattered, and contain but little water. Lat. $26^{\circ} 0' 13''$.

8th. Having observed, from the top of a tree, last night, that the course of the principal creeks was to the southward, I, this morning, preserved a due S. course, and arrived, at sunset, at a deep channel, at which, some time previously, a large party of natives appear to have been encamped; it was now, however, dry, and, after a close search, we could find neither grass nor water for the horses. Lat. $26^{\circ} 13' 49''$ S.

9th. Taking Luff and the black boy with me, I rode up the creek in search of water, but found all the holes completely dry. I then crossed over to the last channel between us and the mountains, but was equally unsuccessful. On returning to the camp, I despatched Harry and Welch to examine the creek downward, and several others to the westward; but they found, by the tracks of the natives, that they were travelling from hole to hole, remaining at each only so long as the water lasted. Our horses being now nearly knocked up from want of food and water, but more particularly of the former, I deemed it imperative upon me to fall back, without loss of time, upon the holes we had left on the preceding day. The party started at 1 P.M. and did not reach the camping ground until after dark. I followed at 2 P.M. with Harry, but owing to the weak state of our horses, it took us $6\frac{1}{4}$ hours to reach the camp, distant

only 13 miles. This being the lowest point we attained on the river, I, before starting this morning, marked a tree on the N. side, and cut ^{E K} 1847 on it. In our ride to-day, we passed a large tribe of natives that had just arrived from the mountains; they had taken possession of a water-hole, and would not allow two of our party, who tried to look into the creek, to go near it; as it was not the spot where we intended to encamp, the party moved on. At 9 miles, I found Niblett sitting by the side of his horse (old Dozey), who was completely knocked up; he had entered the desert an invalid, and seeing that there was no hope of saving him, and that our own horses would scarcely be able to reach the water, I desired Niblett to shoot him. Arrived at the camp at 8.30 p.m.

10th. Marking the camp ^K II, we moved towards our position of the 6th; but, although the distance was not above 9 miles, our horses were so exhausted from want of food, that we could only crawl on at the rate of about a mile an hour. I was obliged to dismount and lead mine; and, after a fatiguing day's journey, we at length reached the water and the only patch of grass in the desert. The tracks of the natives have been very numerous during the last 2 or 3 days, and some were observed watching our slow progress over the plains. Eight natives came up to the camp in the afternoon; they were shorter and not so good-looking as the others we had seen, and made a noise in imitation of the crow. They appeared friendly; but, as we took but little notice of them, and would not allow them to go near the camp, they soon took their departure.

11th. This morning about daybreak two natives were observed by the man on sentry sneaking along the creek, endeavouring to steal my Theodolite-stand, which happened to be near the bank, but, on being discovered, they took to their heels. In the afternoon the king and all his tribe came up, to whom we made presents. With some difficulty I made them understand that I wished them to let one of the boys come with me; upon which they sent them all away, lest, I suppose, we should take them by force. A curious fact I observed here is, that the men chew tobacco; it is, of course, in a green state, but it is strong and hot. I also observed that they approached us without fear, and completely unarmed. I refer to the natives we have met since our arrival beyond the rocky reach of water, or, in other words, since we entered the desert. Halted to-day to recruit our horses.

12th. Our horses being still unable to travel, we remained in camp; and I availed myself of the opportunity to examine the reach under the range and a dry channel to the northward: this reach is more shallow than those we have seen above, and, as I expected, divides and splits into several small channels, but in vain did I search in them for water.

13th. The horses were brought up, and preparations made to recommence our retreat from the desert; but, finding that they were still wretchedly weak, I removed the camp to the reach, distant $1\frac{1}{2}$ miles to the eastward, to enable them to have a day's feed in the bed of the river before undergoing four days' total abstinence. On the way to the reach, "Harpee," one of the pack-horses, fell down from sheer weakness. I walked, considering it would be cruel to ride my horse in its present state. Marked this camp ^K III.

14th. On a bearing of 60° E. of N., we proceeded to our camp of the 4th, not being able to keep more to the eastward on account of a rocky ridge which runs parallel to the river, at a distance of from $1\frac{1}{2}$ to 2 miles. At 5 miles we were met by three natives, who, with their tribe, were encamped on the reach to the westward of us, but they evidently did not wish to have anything to say to us, beyond desiring that we should go on our way. Upon crossing

over to the right bank of the river, I observed nearly sufficient feed for the horses in its bed, and we therefore encamped after a journey of 8 miles, as there was no grass at our camp of the 4th.

15th. Continued our journey; picked up the flour which had been buried at our camp of the 4th of September, and proceeded, on a bearing of 20° E. of N. At 9 miles we encamped upon a small patch of grass I had noticed and shown in my survey, distant about 3 miles from our camp of the 3rd. At the camping-ground we passed this morning we disturbed some natives; they hid themselves until we had dug up our flour, but, just before we left, they came up and ordered us away. My horse's strength being somewhat recruited, I was enabled to ride him occasionally to-day. I this morning made up my mind to accompany my party as far as the place where the carts were buried, and thence make the journey to the Gulf of Carpentaria with Niblett and Costigan, sending the rest of the expedition back to Sydney, under the charge of Mr. Turner. We have now 1620 lbs. of flour, so that I shall be able to start with nearly 8 months' provisions, at an allowance of 10 lbs. per man, and spare 500 lbs. to the returning party, which will be more than sufficient to carry them to the stations. Although I feel great pleasure at the prospect of accomplishing this, the second and main object of the expedition, and consider any risk I may personally incur as nothing compared with the public good, I have my doubts whether I am not putting the services of my men to too severe a test; but they one and all express their readiness to undertake it, and I therefore only hope the result may be proportioned to their deserts. So far as I am concerned, I shall, doubtless, be blamed for taking this step; but no consideration can induce me to return to Sydney until I shall have made every possible effort to carry out the whole object of my mission.

16th. Moved forward to our encampment of the 3rd, upon arriving at which I dismounted with much satisfaction on perceiving the undisturbed ashes of a fire over the hole in which we had buried our flour. Leaving the men to open the pit and get the flour, I consulted with Niblett as to the arrangements necessary to the accomplishment of our contemplated journey to the Gulf, and while in the act of making a memorandum of the different articles we should require, and the number of pack-horses that would be necessary, I was told that the rats had been at the flour. This gave me but little concern, as I knew that all they could have consumed would be but a trifling loss; but in a few moments the extent of our misfortune was disclosed by the discovery that the natives, and not the rats, had been at the flour; they had opened the pit, and had taken away the tarpaulins and bags, together with the shoeing-hammer, &c. ; they had emptied the flour and sugar into the hole, strewn a little straw over them, and then filled up the pit again with as much care as we had bestowed upon it, and the better to disguise it, had kindled a fire over the spot in the same manner as we had done. The damage done was great: out of 400 lbs. of flour, 100 lbs. only were collected clean and fit for use, the remainder being half flour and half clay. This loss I had partly anticipated, when, in my anxiety to reach Captain Sturt's position on Cooper's Creek, I had ordered it to be buried, as we had sufficient without it to carry us there and back to Sydney; but my last night's project of an expedition to the Gulf was by it abruptly terminated, for the quantity destroyed was equivalent to 10 weeks' supply, upon which I had calculated, and I did not consider it prudent to attempt the journey with less than 8 months' provisions, that being as short a time as we could expect to do it in. Were I unsuccessful, I knew that I should be censured for having divided and left my party; and to take less than a ration of 10 lbs. of flour per man each week would be insufficient for the extra fatigue and toil to which we should be subjected by day, and the constant watch by night. These considerations induced me to abandon the attempt, and determine upon returning to head-quarters, with the conviction that I had used

every effort in my power to carry out my instructions. Obtained sights for time, and the distance between the Moon and Saturn.

17th. Removed the camp to about a mile N. of our position on the evening of the 2nd, where the water appears permanent, though not to any great depth. Two of the horses were driven in by their riders to-day, with swollen glands and other indications of the strangles. In the course of our march to-day we observed several native fires, although no natives themselves were visible.

18th. Cutting off all bends, we encamped on the river under the rocky ridge, $\frac{1}{2}$ a mile N. of our camp of the 1st. Obtained sights for time, and took the distance between Moon and Saturn, Sun and Moon, and Moon and Fomalhaut; latitude $25^{\circ} 24' 19''$. The river here is divided into numberless channels, our camp being on the westernmost one; this camp I numbered K IV; it will be easily recognised, being situated in a small bay, formed by the stony ridge which closes in upon the river in latitude $25^{\circ} 24' 22''$.

19th. Remained in camp, and allowed our horses to feed on the best grass the desert can produce. If in any season a blade of grass be left in this sterile region, this would be the most probable place where to find it, on account of the rocky nature of the soil. Obtained sights for variation of the compass.

20th. Continued our journey, and encamped upon our old ground of the 1st September. Received a visit from a party of natives, consisting of three men, a gin, and a little boy; they were quiet at first, but afterwards became very troublesome, and we had some difficulty in getting rid of them. I endeavoured by means of presents, an axe and two shawls, to induce the parents to let me have charge of the boy, but was unsuccessful. Latitude $25^{\circ} 15' 9''$.

21st. At dawn this morning we received another visit from our native friends, whom with great difficulty we kept away from the tents. They were inclined to be very troublesome, attributing our forbearance to fear; but at length we made a start and left them, and, in order to show them that we were friendly, I made the eldest and best-behaved a present of an axe on leaving. On our arriving at the new river, we were again met and followed by a party of natives, who kept adding to their number as they proceeded. Considering it might be curiosity which induced them to follow us, I halted the party, and, dismounting, showed them the men and horses, and allowed them to examine me; after this we again moved on, and I made signs to them to leave us, but in vain. Instead, therefore, of encamping at the junction, as I had originally intended, I deemed it advisable to proceed rather than run the risk of a collision. Blind to all hints and orders, they still continued to follow us, gradually increasing their numbers and becoming more bold and noisy, until at length one fellow threw a nulla nulla at me; we still quietly pursued our journey in the hope of tiring them out, but observing the same native in the act of throwing a boomerang at me, and seeing that all the men were armed with two bludgeons, I considered it time to get rid of them at all hazards. I therefore turned my horse and charged them, when most of them fled; but one lame and evidently troublesome fellow stood, and, raising his bludgeon as if to throw it, dared me to come on. I presented a pistol at him, and suppose the expression of my countenance told him he must go, or be shot, for he soon turned and fled, when, in order to frighten them, we fired two pistols over their heads. It is difficult to explain to the inexperienced how much annoyance a small party must always be subject to from the natives; the kindness and forbearance it is our duty to show towards such savages create in them a degree of boldness and daring not at all times to be checked, I fear, without a severe example. Encamped on the Victoria, about 3 miles to the eastward of the junction.

22nd. Removed the camp about 6 miles further up the river, to a fine reach,

close to which my outward track passed. This being the first spot since we commenced our retreat from the Desert where the horses could be said to have even limited feed, I determined on halting for a day for the purpose of recruiting them. An abundance of fish was caught this afternoon.

23rd. Remained in camp.

24th. Proceeded along our track until we arrived opposite to the lagoon, at which I turned on my last ride. Leaving that close on our left, we moved on to our camp of the 21st August at the rocks which I marked ^K V. Lat. $25^{\circ} 11' 54''$.

25th. Following our former track, we arrived at noon at Camp ^K VI. of the

26th August. Taking into consideration the heat of the plains we were to pass over this morning, I ordered an early start, and we were accordingly on the march at 6h. 30m. A.M. Thermometer at noon 93° in the shade, and at 7 P.M. 73° . Observed the immersion of Jupiter's third satellite at 2h. 50m. 35s. on the morning of the 26th, watch being 12 min. 19 sec. slow on mean time. Lat. $25^{\circ} 6' 31''$; long. $143^{\circ} 45' 15''$ E., by above observation.

26th. Remained in camp.

27th. Proceeded to our camp of the 25th August, on the northern extremity of a fine reach. Lat. $25^{\circ} 0' 8''$ S. Marked this Camp ^K VII.

28th. Returned to the camp of the 19th August, at which I left the party on my last ride, and which I marked ^K VIII. Took observations of north and south stars for latitude, which gave $24^{\circ} 52' 55''$ S., being $4''$ S. of what I had made it in my former visit, and to which I give the preference. Longitude by observation $143^{\circ} 56' 52''$ E.

29th. Cutting off a bend in my outward track, we returned to our camping-ground of the 17th August, which I marked ^K IX. Latitude $24^{\circ} 43' 40''$.

30th. Moved towards our camp of the 16th August. At about 5 miles we came upon a party of natives in a low scrub, who first made their presence known to us in saluting the rear man of the party by throwing a stick at him. They made a great noise, as if to frighten us, but ran away when I turned my horse and charged them. On gaining the open ground, they still continued to follow us, and became very noisy. The rear man being in danger, I desired four men to gallop towards them, and fire their pistols over their heads. This, however, had not the usual good effect; for they kept increasing in number, and followed close upon our footsteps, favoured by the scrub, which in places was very thick. Finding, at a distance of 6 miles, that we could not get rid of them, and that we were approaching a scrub, through which we should have to make our way to the place at which we intended to encamp, I determined on halting for 2 or 3 hours, to refresh the horses. We accordingly did so, and at 4 P.M. resumed our journey, our friends still keeping us company, which they continued to do till we got clear of the scrub, when they deemed it prudent to desist from their pursuit, after having followed us a distance of 11 miles. Encamped on a patch of fine grass in the centre of a plain. The zodiacal light was most beautifully apparent this evening till 8 o'clock, extending nearly as high up as *a Serpentis*.

October 1st. At 6 A.M. we were on the move, and encamped on the E. side of the reach, near our position of the 14th August. Marked this camp ^K X. Lat. $24^{\circ} 24' 49''$.

2nd. Continued our journey; and at starting hoped to be able to keep on a plain between the two channels the whole way to our camp of the 13th

August. We found it, however, intersected by so many channels that we were obliged to alter our course to avoid them ; and, in doing so, came upon my old track, along which we kept, with but a slight deviation, until we arrived at our former camping-ground, where we found the water-hole dry. Whilst Mr. Turner was engaged in searching along the channel for water, we received a visit from a party of natives, consisting of three men and a boy. On my asking them for water, they at once told me to follow them, and they would show me some, which they did ; and, that I might perfectly understand that we were at liberty to take some, the old man of the party led me down to the brink and bid me drink. As a return for his kindness, I made him a present of a knife ; and also gave his companions such things as we could dispense with. I was much pleased with them ; and they were, without exception, the most friendly and best-behaved natives I met with on the journey. They remained with us till sunset, when they took leave, asking permission to visit us in the morning, which was, of course, readily granted. I, however, determined not to remain, lest we should inconvenience them, and therefore ordered an early start on the morrow (Sunday), though contrary to my usual custom to travel on that day. We obtained from this party some useful words, which are correctly written according to their sound :— River Victoria, “*Barcoo* ;” water, “*ammo* ;” grass, “*oo-lo-noo* ;” fire, “*poor-die*,” &c.

3rd. Before sunrise our friends made their appearance, and I entertained them at our fire, it being a cold morning. They were much amused at seeing the men load the horses preparatory to a start ; but their equanimity was temporarily disturbed by one of the horses who would not allow himself to be caught, but galloped down to the water, near their camp. We were visited by only one gin, whose curiosity to see Harry induced her to come up to the camp just before we left.

We have had frequent opportunities of observing that the women of the Desert are not deficient in the principal charm of their sex, viz., modesty. At $\frac{1}{2}$ past 6 we took leave of our kind host, who expressed a hope that he should see us at some future time. We proceeded about 5 miles further up the river, and encamped close to a tree. I marked the camp ^K XI. Lat. $24^{\circ} 17' 16''$ S.

4th. Proceeded to our old camping-ground ; the first within the limit attained by Sir T. Mitchell on the previous journey, which I marked ^K XII.

5th. Keeping along the flat of Yarumgh's lagoon until we got upon our track, clear of the rocky ridges ; along this we proceeded a distance of 20 miles towards the river from the S.E., laid down by Sir T. Mitchell, when we encamped without water. The day having been cool, we accomplished the journey, 20 miles, without fatigue to man or horse.

6th. At 6 A.M. we were on the move, and arrived at our old camping-ground on the S.E. river at 8h. 30m. A.M. I marked this Camp ^K XIII. Lat. by north and south stars $24^{\circ} 15' 47''$. [12th Aug. $24^{\circ} 16' 33''$.—C.]

7th. Kept the track until we arrived at our camp of the 9th August ($24^{\circ} 14' 44''$), where we found the water-hole dry. Having ascertained, however, that there was a sufficient supply of water about $\frac{1}{2}$ mile further up the river, I left the party and proceeded with Welch and the black boy to the spot where we had buried the carts, about 5 miles E. of our present position, which I had the satisfaction of finding undisturbed. A native or natives had evidently been sounding in two places that very morning, and had left, probably to obtain assistance. Determined, therefore, to be beforehand with them, we left the camp at sunset, commenced opening the pit at 8 o'clock, and by 12 P.M. had everything out of it. The soil being dry, we found nothing the worse for two months' interment.

8th. At daylight the carts were mounted and loaded; and at 8 A.M. we moved forward to our camp of the 4th August [lat. $25^{\circ} 15' 30''$.—C.], which we reached at 11. On arriving at it we found ourselves in the company of a party of natives, who appeared greatly alarmed lest we should remain there: and it was not without some difficulty that we obtained permission to do so. I made them a present, but finding that they were becoming troublesome I got rid of them. In the evening some of them returned, making signs to us to leave, upon which I ordered them off. To this they paid no attention; and I therefore sent three men towards them, when they took to their heels. Our horses made an end of the water at this camp; but there is a large hole about $\frac{1}{2}$ of a mile higher up, which I should think is seldom dry.

9th. At 6h. 30m. A.M. we left our encampment, and keeping the right bank, or rather plain, of the river, passed our camp of the 2nd August, near which we observed two natives, which convinced me that there was water in the neighbourhood. Moving on along our track of the 2nd August, we found water at 13 miles, and encamped near the spot at which we crossed the river on that day. Although the holes are not deep, there are several of them; and as the rainy season may be expected in another month, I think it not unreasonable to suppose that water may in most seasons be found along this channel, judging by its appearance on this our second visit. If I were bound hence down the Victoria, I would keep this channel for 20 miles further, and then strike off due W., to meet the opposite side of the bend.

10th. Remained in camp.

11th. Proceeded along my outward track to our position of the 30th July, passing our camps of the 31st of that month and 1st August, at which there was still water. On reaching the site of our former encampment we found the water-holes dry at which we had then watered; but Harry and Costigan found water in the southernmost branch of the river, or rather a brigalow creek running parallel with it.

12th. Wishing to avoid the scrub we had encountered on our outward track, we kept wide of the river. Rounding a point of scrub on an E.S.E. course, we kept more to the eastward, and E. by N., until we came again upon our track about $1\frac{1}{2}$ mile from our camping-ground of the 29th July, on the reach, at which we arrived at 11h. 30m. A.M. We found the water had fallen 3 feet since that time. Natives were seen in the afternoon, but they did not approach our camp. This day's journey was almost entirely over open plains.

13th. Kept the track until we reached the S.E. angle of the river shown in Sir T. Mitchell's map. Then leaving it to our left, took an E.S.E. course until we reached the river, beyond the bend about half a mile above our former camp; finding water in two holes, and not wishing to pass our second camp from this before Saturday, on account of some observations I wish to make then, we encamped at 10 A.M. The plains or downs between this and the reach are covered with fine pasture, and being hard, sound ground, are well adapted for sheep or cattle. At sunset squally weather set in from the westward, accompanied with a heavy thunder-storm and rain; but at 10 P.M. the wind shifted to the S.E., and the remainder of the night was fine.

14th. Continued our journey along the track to within $1\frac{1}{2}$ mile of our camping-ground of the 27th July, when, leaving it on our left, we made the river about $1\frac{1}{2}$ mile beyond it, and encamped on the east side. The water has greatly fallen since we were last here; but there is still a little in almost every hole. Rain has evidently fallen here lately; for the plains are covered with the most luxuriant green grass.

15th. Moved our camp to the ground we occupied on the 26th July. Obtained sights for time, and observed the distance between the Moon and Saturn, Moon and Fomalhaut, and Moon and "a Pegasi."

16th. Made observations for latitudes, the result (mean of North and South

Stars) being $24^{\circ} 52' 49''$, determined to be $24^{\circ} 52' 52''$ on my former visit. Observed the eclipse of Jupiter's satellite at 2h. 35m. 52s., and obtained sights for time by single altitudes of the sun. Proceeded to our position on the 24th and 25th July, keeping the track the greater part of the time. We found an abundant supply of water at this camp, although it had fallen 3 or 4 feet since we were here before, and the channel will be dry in another month unless rain comes in the meantime.

17th. Remained in camp. It blew a gale of wind from the eastward throughout the day and night.

18th. Bade adieu to this plain of the Victoria, and kept our track towards Happy Valley. On arriving at that point of the watercourse, at which it has a sharp bend from the northward, and being on a sandy ridge similar to those on the Nive, I struck off from the track, and kept an easterly course through the most open ground we could find until we made the Nive, at about the same spot at which our outward tracks had quitted it, and about $1\frac{1}{2}$ miles below the junction of the Brigalow Creek, laid down by Sir T. Mitchell. Took up our old position at the junction about noon. Found the water falling fast.

19th. Removed the camp to the junction of the Nivelle, a short stage, but being uncertain as to where I might next find water, I thought it prudent to halt there, and prepare for a forced march; the hole was dry, but we obtained sufficient water by sinking three wells.

20th. Made an early start, and at 11 A.M. reached our camp of the 20th July; but finding no water in the creek, pushed on to one 7 miles further, at which I had bivouacked twice, and had always found abundance of water. On reaching it, however, we found the holes perfectly dry. Having travelled 20 miles, we rested our horses for a couple of hours, and at 5h. 30m. P.M. again moved on, following the track by moonlight. At 10 P.M., after having travelled a distance of at least 30 miles, we made our old camping ground near Mount Playfair, when the horses could scarcely be restrained from rushing to the hole, at which they had formerly watered. It now, however, presented the appearance of a hole that had not contained water for months, being perfectly dry, and full of dead leaves; and we were consequently obliged to keep the horses on tether all night.

21st. At 5 A.M. we resumed our journey, and reached our camping ground of the 17th and 18th July on the Warrego at 9h. 30m. Here we found, as I had anticipated, an abundant supply of water. This hole and that on the Nivelle are the only two between our present position and the reach on the Victoria to be depended upon in a very dry season, although I should think this part of the country is very seldom visited by such a drought as prevails at present, judging from the healthy appearance of the trees and the luxuriance of the pasture on the Victoria plains.

22nd. Allowing the horses a day's rest after their long march, I rode this morning in a south-westerly direction to the range laid down by Sir T. Mitchell on the W. side of the Cuno, with the view of ascertaining whether there is a watercourse of any importance between it and the Warrego. After boring through the very dense scrub which crowns the dividing ridge, I came upon an open forest country, and crossed a number of shallow creeks and flats, in which the holes were dry. Having reached the range, and satisfied myself that there was no very considerable creek between it and the Warrego, I returned to the camp; but, instead of coming back through the scrub, kept it on my right, and rode in a north-easterly direction. On this course I observed an opening in the scrub, through which I obtained a clear passage to the cart tracks. In going from the Warrego to Mount Playfair the thick casuarina scrub might, therefore, be avoided by turning to the left just before entering it. The night being cloudy, I was prevented from observing the eclipse of Jupiter's satellite.

23rd. Removed the camp to my dépôt of the 4th to 16th July, where we found a plentiful supply of water, as well as at the hole half a mile lower down on the S. side. It commenced raining at sunset, and continued almost incessantly throughout the night.

24th. The rain continued till noon, when it cleared up. In the evening there appeared to be a very heavy thunder-storm to the northward of us. Conceiving it desirable to ascertain whether the Warrego was a southern water flowing into the Maranoa or a western one flowing to the Desert, I determined upon tracing its course for 3 days.

25th. Taking Luff, Douglas, and Harry with me, I left the camp early this morning to follow the course of the river down; but on my arrival at the wells I found so much rain had fallen lately that I resolved to return, and take the party with me, and run the chance of its joining the Maranoa. At 1 p.m. I again left the round water-hole with the party, and at 3 p.m. encamped near the wells.

26th. Continued our journey down the Warrego, and, at about $5\frac{1}{2}$ miles on a southerly course, lost sight of the river, and found ourselves on the top of a pretty high ridge. Finding an easy descent, we followed a water-course down in a south-westerly direction, between brigalow ridges, until, at 7 miles, we reached Kangaroo Creek in lat. $25^{\circ} 33' 24''$. Its bed was broad and sandy, but dry, where we made it. Luff and Costigan found water about a mile W.S.W. of the camp, to which the horses were taken.

27th. Proceeded on a course a little to the westward of S., but finding that we must keep more to the W. to make the river, we gradually altered it until we crossed it at about 5 miles from last night's camp. Cutting off an angle, on a S.S.W. course, we touched upon the river, where there was a good water-hole. On the right bank of the river there was a clear elevation, from which I took the bearing of a ridge N. 77° E., and observed the Warrego in the opposite valley. At about 18 miles arrived at the junction of Kangaroo Creek with the Warrego in latitude about $25^{\circ} 35'$. Not finding any water, I sent the party back to the last hole we had passed, and rode 5 or 6 miles down the river; it preserves an almost due W. course for that distance, when it receives a sandy tributary, probably the Nive, and takes a southerly course. I returned to the camp, undecided as to whether I should continue to trace the course of this river or give it up as a westerly water. Lat. $25^{\circ} 30' 6''$. A single native was seen this evening; he came to his guiah with two or three cockatoos, but departed on finding us in possession of the spot.

28th. Encouraged by the southerly turn I observed in the river last evening, I determined upon tracing it, so long as my stock of flour would admit of my doing so. Having left a chisel and other presents in the tent of the native I saw last night, as an acknowledgment for the water we had used, we proceeded on our journey down the river, and at noon halted, without water. Sent a man down its bed in search of some; and, after giving the horses a couple of hours' rest, moved on to water in lat. $25^{\circ} 40' 36''$.

29th. Continued our journey down the river, which at first took rather an easterly turn. At 9 miles, on a general southerly course, encamped at the junction of a creek from the eastward, where water may in all seasons be found. Lat. $25^{\circ} 51' 22''$. Marked this camp XIV. At our encampment of last night there is a reedy hole which in a favourable season must contain a fine sheet of water; and, although the extreme heat of the weather and the heavy nature of the ground would not admit of my making a close search, I feel sure that this part of the river is well watered.

30th. Travelled down the river on a general S.S.W. course. At about 8 miles crossed Yo-Yo Creek, and followed it down to its junction with the river under a brigalow ridge on its left bank. Encamped on the W. side of the

river, at the junction, in lat. $25^{\circ} 57' 55''$. Marked this camp **XV**. We disturbed a party of five natives in the Yo-Yo Creek, who ran away at first, but returned after the tents were pitched. Taking Harry with me, I went up to them, and found them to consist of an old man, his girl, and four sons; they were a most orderly set, but at first to everything we said to them they replied Yo-yo, by which perhaps they meant to signify their assent to all our interrogations. We exchanged presents; and, although I was not able to obtain much information from them, I found that their language was the same as that of the natives of the desert. At sunset we parted company, we returning to our camp, and they to theirs on the opposite side of the river.

31st. Obtained distances of moon and Mars, and sun and moon, also sights for time. Took Welch and Harry with me to the summit of a ridge bearing S. 70° W., distant from the tents $3\frac{1}{2}$ miles. The view was not extended, but Mount Boyd bore E. 5° S., and a more distant range N. 80° E. In the evening our Yo-yo friends paid us another visit. I showed them the camp, and gave them some bread and tea, but they used both very sparingly. I have remarked that all the natives we have met are scrupulous in tasting anything

we give them. I showed them the tree marked **XV**, that in case any one should make inquiries they might be able to show it to them, as the natives of the Balonne did to me on a similar occasion. They all seemed to say that there was plenty of water to the southward, but none to the westward.

Nov. 1st. Following the easternmost branch of the river, we continued our journey down it. At 5 miles the river divided into a number of small channels; but, a mile further on, we found abundance of water in the easternmost branch. At 9 miles, a brigalow ridge closed in upon the river; and, at 10, we encamped; the excessive heat of the weather rendering it impossible to travel after 12 o'clock without great injury to the horses. We obtained water in a rocky hole off the river, but about $\frac{1}{2}$ a mile up the eastern channel there was a fine reach of water. The country travelled over to-day was open, and would make an excellent cattle station. Lat. $26^{\circ} 6' 30''$ S.

2nd. Continued our journey down the E. bank of the river, over open flats and a forest country. At 8 miles came upon an open acacia forest, running along the side of a ridge; but the top being too thick to penetrate, we ran it down to the river, and encamped after a journey of 10 miles. The river is here divided into several channels, but contains a reach of water at the point of the ridge about 500 yards below our camp. Thermometer (Fahr.) 104° in the shade. Several thunder-storms were observable passing to the northward, but no rain reached us.

3rd. Moved onwards, but as the river here seemed to take a westerly turn, and from the latitude we were in I expected the reverse, I kept a southerly course so as to cut off the bend. At 5 miles got upon table land, and travelled through thick acacia scrubs, and over small plains which appeared to have been cleared of scrub by fire. At about 15 miles saw plains, and a scrubby ridge bearing S. 85° E., and encamped after a journey of 21 miles without water, but with the fall of the ground before us. Thunder-storms were flying about all day.

4th. Much against my inclination I felt bound to steer towards the river, and not continue my present course, in expectation of meeting it; and, accordingly, I travelled W.S.W. through thick scrubs and over sandy ground. At 3 miles we were obliged to take the horses out of the carts, and the packs off the horses, and lead them to water, leaving two men in charge of the property. In $1\frac{1}{2}$ mile made the river, and about 3 miles down it found abundance of water. After allowing the horses to drink, the worst were left with Harry, while the remainder went back for the carts, and at 11 A.M. we were established at the water. Natives were seen at some distance from the camp

burning the grass, and in the evening I could hear their voices in our neighbourhood. Latitude, $25^{\circ} 31' 0''$ S.

5th. Continued our journey down the left bank of the river, which here takes a great turn to the eastward; at 3 miles crossed a flat, on the E. side of which I observed the line of pine-trees seen the day before yesterday under the plains. At 4 miles met six natives with whom I stopped to speak, but could obtain no information from them; hearing me ask about water they followed me, and one of the party acted as guide to a fine reach very similar to those on the Balonne. In return for his civility I gave him an old powder-horn, and bade him and his friends adieu; but they followed us for a mile or two before they finally left us. They were as ill looking a set as I have met with, and the young man who acted as our guide had in his belt the blade of a knife, which Niblett recognized as the property of W. Bond, and which had been lost at the dépôt on the Maranoa. After travelling about 10 miles, we encamped at the junction of a deep creek with the river, which to-day has preserved nearly a S.S.E. course; the night being cloudy prevented my observing the latitude.

6th. Continued our journey, and endeavoured to keep a southerly course; but had great difficulty in doing so, in consequence of the scrubby and soft nature of the ground. At 8 miles observed a fall of ground to the S.S.E., and therefore preserved the same course as we had been previously keeping, although the cart-horses were nearly knocked up by the extreme heat and soft ground. At 10 miles observed smoke in front of us bearing S.S.E.; but after going $1\frac{1}{2}$ mile further, the wretched horses were completely exhausted, and we were obliged to rest for an hour. In the meantime I rode on with Harry; but not succeeding in making the river as soon as I had anticipated, and the ground being heavy, I decided on returning to the carts and conducting them to the nearest point of the river. Accordingly, keeping S.S.E., at sunset we descended a gully and encamped upon a creek containing water, in the neighbourhood of which there was excellent pasture for the horses.

7th. Moved the camp down to the river about $1\frac{1}{2}$ mile W.S.W. In no part of the colony have I seen more luxuriant pasture than is to be here met with. The river contains a fine deep reach from 50 to 60 yards across, and the lagoons and holes near its bank are full to the brim. The grass has the appearance of a wheat crop, so thick and high has it grown; which, coupled with the plains on either side of the river, render this as fine a site for a station as could be desired. Lat. $26^{\circ} 54' 17''$ S. Marked this camp ^KXVI. Although two eclipses of Jupiter's satellites occurred last night, I was unable to observe them in consequence of the cloudy state of the weather; and there being no moon I could not determine the longitude of this camp, but it is nearly under the same meridian as our position of last Sunday, which was $146^{\circ} 44' 7''$ E.

8th. Considering it a pity to lose so fine an opportunity of recruiting the horses, which stood much in need of rest, I determined on giving them till Thursday (3 days) to recruit. Taking Luff and Harry with me, I rode to a ridge about 2 miles distant from the camp in a S.S.E. direction; but the scrub was too dense to admit of a very extended view. To the westward, forest land appeared to extend as far as the eye could reach.

9th. Taking Welch with me I rode down the river, to the southward, to examine the country. Although I did not reach it, I am convinced that the river, which here takes a tremendous sweep to the westward, returns as much to the eastward, a few miles from our camp.

10th. Sent Luff and Harry along my tracks of yesterday to the southward in search of the river. At 4 p.m. they returned, having, as I had anticipated, come upon the river in that direction, so we shall be saved a long détour.

11th. Continued our journey down the river, keeping a general S. course,

and thus cutting off considerable bends. At 11 miles the river was close on our right, and we ought, perhaps, to have encamped there; but the appearance of the country to the eastward of S. was so favourable, that I was induced to push on in the hope of avoiding a journey to the westward: finding, however, at 12 miles, that we were not in sight of the river, we again had to turn in towards it, and make it in about $2\frac{1}{2}$ miles to the westward.

There are fine reaches in the river at this point, from 60 to 70 yards across.

The night was cloudy. I marked this camp XVII; lat. $27^{\circ} 5' 55''$ S. I observed to-day no less than 5 trees destroyed by lightning in a late thunder-storm, which had filled every hollow in the country. Within a few miles of the river, though no rain fell, a very little fell 5 miles to the southward; the trees were from 30 to 40 yards apart.

12th. Pursuing the course of the river, which we found to be nearly S.S.E., containing a succession of reaches, and having fine grazing land on either side, we encamped at Camp 18, in lat. $27^{\circ} 14' 3''$ S., on a fine sheet of water nearly 2 miles long and 60 yards broad.

13th. Having ascertained that the river took a westerly turn a short distance below our camp, I, this morning, decided on a S. course, which we kept over the most beautiful grassy plains for nearly 20 miles; at that distance I inclined slightly to the eastward, and encamped without water at 25 miles, having a ridge bearing from W. to W.S.W. distant 4 miles on the opposite side of the river. It blew a gale from the eastward throughout the night. This evening about 5 o'clock, before I had deviated from my S. course, I reached a flat falling S., doubtless into the river, and as I had previously taken the bearing of smoke well to the eastward, I now regret that I did not follow it down. My anxiety to find water for the horses, after a long day's journey, induced me to seek the nearest point of the river.

14th. Continued my journey a little to the westward of S., and, at 4 miles, arrived at a pine ridge, which lies parallel with the river. Running down a box flat in order to avoid some of the sand, we at length crossed the ridge, and at $5\frac{1}{2}$ miles encamped on a lagoon near the river, in lat. $27^{\circ} 41' 33''$. Camp 19, $1\frac{1}{4}$ miles W. of 18.

15th. Pursuing a S. course, at $1\frac{1}{2}$ miles we crossed the flat upon which I had touched on Saturday evening, 13th instant; from its appearance I have no doubt it contains water higher up. Travelling over fine grassy plains for 9 miles, I kept a general S.W. course over pine ridges and a small plain until I made the river in $4\frac{1}{2}$ miles; running it down for half a mile, we encamped near a small reach of water in lat. $27^{\circ} 56' 31''$. Young Harry returned from duck-shooting, reporting that he had seen a native peeping at the man who had just before fired a shot. Upon my asking him whether he spoke to the native, he replied, "Bel; that fellow run above when him see me putting in ball belong it gun." It appears that he had at the time only a charge of duck-shot, he therefore deemed it prudent to ram down a ball on the top of it.

16th. Clearing the scrub along the river-bank, we travelled over plains not so well grassed as those of yesterday, for 8 miles, in a direction S. by E.: arriving at that distance on a fine reach of water we encamped, as I wished to make several astronomical observations; the afternoon unfortunately proved cloudy, and so continued. I was not even able to ascertain our latitude, which must have been $28^{\circ} 3'$ or thereabouts.

17th. Continued our journey down the left bank of the river, here divided into many shallow channels, and intersecting a poor and badly grassed country. After a close search, we found a sufficient supply of water by clearing away the sand, and pitched our tents at

K XXII in lat. $28^{\circ} 15' 44''$. Longitude, as

determined by lunar distances of sun and moon, and ☽, and Aldebaran, being $145^{\circ} 28' 52''$ E. During this day's journey several channels broke off from the river and went to the eastward.

18th. Proceeded over a level parched country, with here and there thick patches of acacia scrub. At 3 miles Harry surprised a young lubru; but although, by hard galloping, we managed to stop her, we could not obtain any information from her, or, indeed, induce her to speak a word; we therefore let her depart in peace, and continued our course. At 7 miles we touched on the river here, a parched bed of sand; following it down for some distance we arrived at a point where its channel most singularly splits into two, the one running due E., the other due W. at right angles to the main channel. Harry having been down the eastern arm in search of water, I despatched Welch and him down the western arm, and halted the party until sunset. At 7 P.M. I moved on slowly, S.E. by S., intending to push on to the Culgoa, in case Welch should fail in his search. At $23\frac{3}{4}$ miles we arrived at the eastern arm, running W. to rejoin the other. As the men would require a halt for supper before many hours, I made one answer the two purposes. At 11 P.M. Welch overtook us, and reported that he had followed the river for 9 or 10 miles, and that where he left it, it was reduced to an insignificant sandy bed of no width, not presenting the most remote sign of water. They had passed the junction of the channel upon which we then were, but there was no improvement in its appearance; its general direction was W. Harry, who has a very good idea of the "lay" of a country, said he thought it would shortly terminate. I think it more likely to be the source of some of those shallow pools or lakes discovered by Mr. Poole in this latitude further to the westward. Unable to obtain water in the Warrego, even by digging, at midnight I steered S.E. by S. in the hope of reaching the most western arm of the Balonne. At daybreak we crossed a shallow creek falling to the eastward, and at 7 A.M. found the same creek enlarged, inclining to the southward. A dense smoke appearing in my line of march, I hoped to arrive at water at no great distance. At 8 A.M. we re-crossed the creek near the smoke, and found a plentiful supply of water.

19th. Having arrived at 8 A.M., I gave the horses rest for the remainder of the day. In the afternoon several natives came up to the tents; they were fine men, and appeared disposed to be friendly. They understood the Victoria language, but spoke a different one. Upon repeating a few words of the Victoria, they pointed in that direction, and appeared well aware from whence we must have come: we could not obtain the name of this creek, nor did they seem to know the names Balonne, Culgoa, Narran, &c.

20th. Started for the Culgoa S.E. by S. and S. 37 E., following the creek for about 2 miles, when we left it. It was then diminished; and turning to the eastward, after having passed two sand ridges we entered a box flat and open forest, which, broken here and there by small patches of scrub, continued for 17 miles. The ground was that loose crumbling soil found on the Narran, and which is very distressing to horses. At 17 miles we came to a pine ridge; and at about 20 miles, not having fallen in with any water, I halted until 11 P.M., in latitude $28^{\circ} 59'$. Travelling by moonlight, we moved on through scrub, alternating with pine and brigalow. At daybreak we had made only 9 miles. At 6h. 30m. A.M., finding the horses, especially those in the cart, wearied by so long a journey over such a wretched country, I decided on having them unharnessed, unloaded, and taken on to water. The party cast lots for the two to be left behind; they fell to Mr. Turner and Douglas. After every one had had a pot of tea from the keg, there remained three quarts for the two persons left behind. At 6h. 35m. I pushed on with the horses; one of them was not expected to travel more than a mile, as it was with difficulty we could get him to stand upon his legs.

After boring through the scrub in a direction S. 37 E. we reached a plain at 5½ miles. The smoke we saw yesterday was directly in our front, with detached smokes in a line with it; they all rose from behind a belt of timber, about 4 miles distant on the opposite side of the plain.

Confident they must be in some watercourse, we crossed the plain full of hope; even the poor animals quickened their steps at the sight before them, but we were only hastening to disappointment, and about to enter as dreary, wretched, and worthless a country, as imagination, however excited, could conceive. It was now nearly noon; the thermometer marked 112°, and we were crossing herbless ridges of red sand, bearing nothing but a few stunted iron-bark scrub, and patches of spinifex; these with a brush of poison-wood were in flames all around, adding intensity to a hot wind almost intolerable, and much against the poor thirsty animals, that had barely strength to crawl away from the fire, as it roared towards our flank. At 1 P.M. I left the horses (all endeavouring to obtain shelter from a solitary Kurrajong tree, which was scarcely capable of affording shade to one), and walked to the top of a sandy eminence upon our left. Sweeping round with my glass, the same desolate, terrific-looking country presented itself on all sides.

Returning to the horses, I determined to pursue my course S. 37 E. until we should reach some shade in which the horses could stand till sunset. At 2 P.M. we entered a pine scrub, and halted till 7 P.M., having travelled about 18 miles. As the sun was setting we made preparations for proceeding. Changing the course to E.S.E., we had to bore through a pine scrub. At 3 miles Rattler was reported to be "knocked up," and unable to move any further; he was therefore left, as delay would, perhaps, occasion the loss of many other horses. We just then came out upon an extensive plain, and for a while I entertained a hope that we had entered a better country, and had seen the last of the scrubs; but, alas! having reached the timber on the opposite side, instead of seeing flooded streams, or the sign of a watercourse, brigalow again appeared. Pushing through it, at 7 miles (27 from the carts) we reached a small grassy plain. It was then 11 P.M., and as the horses had eaten nothing for two days, we halted until 2 A.M. At 5 we again moved forward for a short distance through a brigalow scrub, but beyond it, through a long and close pine forest. In the latter we dropped poor old Jack, an excellent cart-horse, and perhaps the most generally useful horse I had. At 3 miles further, Boxer, our best cart-horse, and my private property, was abandoned; but the black horse, that appeared not able to stand before we left the carts, continued to lead the rest, although he took every opportunity of lying down. Having cleared the pine scrub in 4 miles, our old friend brigalow re-appeared. At 34 miles, it being then daybreak, a number of gallard birds flew past us, which gave me great hopes that we were fast approaching the river. At 40 miles, and 20 minutes before 8 A.M., we arrived on the Culgoa, in lat. 29° 29' 41" S., long. 146° 18' E. We had then travelled about 70 miles without water, and had it not been for the unusually heavy ground passed over on the first day and night, and the sandy nature of the country we had to cross in a hot wind, as if in front of a furnace, the thermometer standing at 110° in the shade, we should have brought all the horses through; but these unfortunate circumstances were too much for the cart-horses, after their fatigue in the carts. Having allowed the horses to feed till 4 P.M., I despatched Welch, my lightest man, and Harry the native boy, as tracker, to take six gallons of water in two kegs (3 in each), and tin flasks holding in all another gallon, to the two men left in charge of the carts. For this purpose he rode the chestnut colt, Harry the black colt, and Punch carried the kegs, the only horses then capable of returning. Niblett on Two over Five, and Luff on Harper, left at the same time to relieve the two cart-horses left behind with a quart of water from Welch's tin flasks.

23rd. I anxiously awaited the return of Niblett and Luff, whom I expected to bring up Jack and Boxer in the cool of the morning; but about 11 A.M. they made their appearance without either. Jack they had found dead, or so far gone that he could not swallow water poured down his throat; but Boxer had moved from where he had been left, and they were unable to trace him. Having no horses but those I required to convey water to the carts, I was then unable to make any further search. Took a walk to the eastward in the afternoon, and found a miserable flat parched country with patches of acacia scrub.

24th. My instructions to Welch, before he started with the water, were to make the best of his way to the carts before daylight, and not to delay on the road; but, after having arrived early in the morning, to keep the horses in the shade until sunset, when Douglas and Harry were to return with the empty kegs and tins. I requested Mr. Turner to stay a day or two longer in charge of the property . . . At an early hour I stationed myself in the best position for seeing furthest down the track, most anxiously awaiting the arrival of Douglas. Should the three colts perform their task, I knew that some of the other horses, with the additional rest, would be able to manage it; but should they have knocked up on the road, how was I to relieve the men 40 miles distant? Had the man marched on foot with water in such weather, he would himself have required as much water as he could carry to assist him to the carts. The case was almost desperate, and if I had never known painful anxiety before, I experienced it *then*. Hour after hour passed, but no one appeared: out of patience, I had my horse up and rode along the track to meet them. At length, when 4 miles on the road, at about 11 A.M., Luff told me he fancied he saw them coming, and to my joy I soon found that he was right. The poor colts, having been allowed to rest too long during the night, were tottering along, trying their utmost to reach the water they had started from, under a most powerfully hot sun. Refreshed by washing out their mouths, they got on wonderfully well. My mind was now relieved as to the safety of all the men in the party; and I received a note from Mr. Turner telling me that they had 7 quarts of water left when Douglas started, and that he hoped I would not expect them to wait longer than Friday. In consequence of the low condition of the horses, I deemed it prudent to send no oftener than was actually necessary. I had in my last journey frequent opportunities of being acquainted with that critical time. It was my intention to have sent Costigan and Wall, the two lightest men, but Mr. Turner expressed a wish that Luff should be one of the men. I determined upon sending them away on Thursday evening, to arrive early on Friday morning. As natives had not hitherto been seen on the river, we did not imagine that they were near to us; but two were observed about 9 A.M. stealing down the bed of the river. Having no fire-arms at hand, I gave an alarm, upon which they made off; but immediately afterwards a boomerang was thrown at me; it fell about 5 yards short of the mark, and was immediately answered by a shot. We heard no more of them.

25th. Passed the day in bivouac under the shelter of boughs; the thermometer stood in the shade at 110°. At sunset Luff and Wall started with water for the carts, taking 6 gallons in kegs and 1 in tins.

26th. Seeking shade most unsuccessfully all day, the thermometer standing at noon in the shade at 112°.

27th. Anxiously expecting the arrival of Mr. Turner and Welch. Circumstances which I will not here detail gave me great uneasiness.

28th. In bivouac on the creek. At sunset I took Douglas, Costigan, and Harry, with 6 horses and 10 gallons of water in the bed, and started for the carts. The night became excessively dark, and we were compelled to halt 2 hours in the scrub; but at 5 A.M. we arrived at the flat, half way to the carts. The heat caused us to travel slowly. A close night and a hot wind increasing that of the day, I was so fatigued I could hardly reach my destination. We

arrived at the carts at 2 p.m., and after an hour's sleep commenced arranging loads for the return. About sunset we started homewards, and had the good fortune to enjoy a drizzling rain for the first few hours. At break of day we reached the flat, and gave the horses a drink and an hour's feed; then moved on and arrived in camp at 2 h. 20 m. A.M. of Tuesday the 30th.

Dec. 1st. Took observations for longitude, which I made $146^{\circ} 18'$.

2nd. Playing at patience in bivouac until the horses regain their strength.

3rd. Taking Niblett with me I started on a due north course for 20 miles, with the view of ascertaining the direction of a tributary to our river. For that distance we were never out of scrub, either brigalow or pine, generally the former. Having reached the latitude of the carts I turned towards the river, which I reached the following morning, 8 miles to the eastward, in lat. $29^{\circ} 11'$.

4th. Convinced that I could not improve upon my first track I returned to camp, keeping nearer to the river, of which the general course is about S.W. by S. We reached the tents at 8 p.m.

5th. In the afternoon the bed was again filled with water, and at 1 p.m. Luff, Costigan, and Welch started with the horses for the carts; Wall accompanied them to bring back the bed from the half-way flat, where they were to water the horses; Harry also went with them. I wished them to reach the flats about 8h. 30m. P.M., and by Harry's guidance to be at the carts before day-break, at which time they were to return so as to meet Douglas, who had 14 gallons of water at the flat about 10 $\frac{1}{2}$ A.M. They were to reach the pine scrub in the cool of the evening, and then to find a fresh supply of water, so as to be at the camp in the early morning.

6th. Wall reached the camp at 5h. 54m. A.M., the bed was filled, and Douglas started with it at 7h. 10m. A.M.

7th. Douglas, who ought to have been back at 10 o'clock last evening, had not made his appearance at day-break. It was $11\frac{1}{2}$ before he came, Harry having lost the track for the first time on Monday night (6th); they had been compelled to halt 15 miles short of their destination. In consequence of this they were obliged to start at mid-day, and had to toil over the plain and sand ridges in heat sufficient to kill the stoutest and strongest horses. Owing to this they lost 12 hours, and the bed had to be refilled and sent up to meet them.

8th. Douglas returned at 1 A.M. and reported that the horses had been brought forward, but that the carts had been left 5 or 6 miles behind. Boco, one of the leaders, was unable to come on until he had had a dish of water.

9th. Taking about 20 gallons of water I left the camp at 5h. 40m. A.M. with Niblett to meet the carts and see the state of the horses. Boco had been left $2\frac{1}{2}$ miles behind; I determined to allow the horses a few days' rest at the river before they attempted the pine scrub and sand ridges. I sent Niblett with 6 gallons for Boco and returned to camp, desiring that the horses should be allowed their own time. I wished to observe the eclipse of Jupiter's 1st and 4th satellites, but Mr. Turner, who had the first watch, called me at 1h. 10m. A.M. instead of 1h. 45m. P.M. The mean of my observations on the satellites, and the calculation by lunars, gave my long. $146^{\circ} 6' 22''$. It was 12 miles W. of the truth. All the cart horses except Boco and Captain came in in the afternoon, and Luff remained with the latter, 7 miles off, till the evening.

10th. I despatched Mr. Turner and Wall with the bed, containing about $2\frac{1}{2}$ buckets of water for Captain and Boco. Niblett and Wall returned at 2 p.m., telling me they found Boco insensible, and that he died in the night; he seems to have broken his neck by falling whilst attempting to rise from the ground. Captain, they said, would be able to come in if he had a further supply of water, which I sent by Welch, but the poor animal died in spite of it, of fatigue and exposure to the sun. These accidents were in some degree

owing to Harry's losing his way, and the proceedings of the 27th of Nov. I had intended to drive the carts in myself, but was too exhausted to travel on foot, and my presence was needed to superintend the filling of the bed.

11th. This being ration morning, and having 12 lbs. of flour left, I gave half of it to Douglas, telling him to make it last the week. I then served out powder and shot to the sportsmen and sent them out to procure a meal. We had a small piece of bread for breakfast, but for dinner a quart of soup, a pigeon each, and enough bread to lay by a portion for tea.

12th. Being Sunday, we had morning service at half-past 9, before the heat of the day. Had pigeon soup and a pigeon each for dinner; in the evening I had 13 gallons of water put into the bed, and at 7h. 5m. left the camp in charge of three men, taking the rest and all the horses for the purpose of bringing home the carts. At $7\frac{1}{2}$ miles, on a grassy flat, I left the bed slung to a tree in a tarpaulin, and at half-past 7 A.M. reached the carts. By the time we had made up packs and loads for the horses and arranged the carts the day broke. Welch, Harry, and I rode 3 miles beyond the carts, to see whether a track spoken of as running off from ours, was one made by the last horses. We found two tracks made by Wall's horses, when returning to camp at night, he having lost his way. As soon as it was light the carts moved on, and before I could overtake them with the pack-horses they were through the much-dreaded pine-scrub, the horses drawing steadily, although five of the six were acknowledged "gibes." At a quarter to 9 we arrived at the flat, and watered the cart-horses from the bed, which had not lost a drop, and allowed them to feed until a quarter to 11 A.M., when we again started, and reached the camp at 2h. 6m. P.M. having lost six horses, by a series of misfortunes, between the camp and the last water, five of them having been our best cart-horses. We had a pot of tea on arriving and another in the evening, with a morsel of bread each time. I mention our *feasts*, as some of the men fancy they are starving. Although I had no sleep during the last 36 hours, I was glad to take charge of the camp during the first watch, in order that I might be prepared to observe the eclipse of Jupiter's third satellite, at 10h. 54m. I was disappointed, for the only haze which obscured the planet was unfortunately at the time when I wanted it to be clear.

14th. Worked the distance taken last night between C and Mars, the result being 30" more E. than that from C and Sun. We had a quart of soup and a pigeon and a half each for dinner, and the usual portion of bread.

15th. The carts were mounted on their wheels, &c., and preparations made for an early start in the morning. At noon the weather became cloudy, but between squalls and passing showers I obtained sights for time. My watch has gained but one second in the last two days, whereas a few days back it gained 19" daily. Nimrod was put in the cart the first time this evening, and did well. Our dinner to-day consisted of a quart of soup and two pigeons each.

16th. Left Camp 24 in high glee at being again on the march homeward. On account of my new shafter, I have been compelled to keep the open forest close to the river, and I fear my sketch of the route is not as correct as usual, but I think our course has been E. of S. At 4 P.M. we had a heavy thunder-storm from the N.W., which saturated our tent inside and outside in a moment; the steam caused by the heavy rain on the heated soil was almost sufficient to suffocate us, but we shall feel the benefit of it in a few days if the rain does not imprison us here 17 days, as it did this time last year, when I was on the Mooni. It is a curious coincidence that, about this time last year, or one month earlier, I first suffered severely from want of water and excess of heat, and immediately after was detained most provokingly by too much water. Appearances favour the idea of a detention from similar causes, which, with only 70 lbs. of flour, I can ill afford to encounter.

17th. As the weather cleared in the morning, I determined to start in the afternoon, when the tents and tarpaulins would be dry, a saving of at least 250 lbs. weight to the horses. Harry brought home a pint pot he had found in the morning—a proof that we are approaching the civilized world. At 25 minutes after 12 we broke up our encampment in a heavy shower, and moved slowly towards S.S.E. till 2h. 30m. p.m. I turned eastward to the river, and reached its bank at $\frac{3}{4}$ of a mile.

We had scarcely pitched our tents when the rain descended in torrents. As it was too dark and wet to do anything, and it kept me free from my own reflections on a probable detention, I amused myself reading 'Burke's Reflections on the French Revolution.'

18th. Taking advantage of a temporary suspension of the rain, we moved off at 8h. 55m. A.M., travelling E. of S. for nearly an hour. At this distance the river takes a sharp bend to the westward. Finding a well-beaten native track, I kept it, as it cut off the bends of the river, the general directions of which were about S.S.W. by compass. At 12h. 20m. we encamped on the W. bank of the river. The wind shifted to the southward about 9h. 30m. A.M., and soon brought a clear blue sky. The party saw bullocks' and calves' dung to-day. Our last two days' dinners consisted of two pigeons and a quart of soup each day per man. My watch is 10h. 57m. too fast. Observed the eclipse of Jupiter's second satellite at 12h. 12m. 29s., which gives the longitude $146^{\circ} 30' 30''$, about 6 miles W. of Camp 24; the latitude of this (Camp 25) is $29^{\circ} 44' 57''$.

19th. Our stock of flour and powder being very low, I considered it ex-usable to travel to-day (Sunday), although contrary to my usual custom; accordingly, we moved off at 6h. 35m. A.M. We kept a native path for two hours, running S.W. and by S. By the fires we saw that a party were on their journey before us; we soon drew within hearing of the gins. At 8 miles we overtook them, but they ran off as soon as they observed us. A guilty conscience must have troubled them; and I suspect, from the bullocks' bones we find here and there, we had evidence of their depredations. At about 9 miles the cattle tracks, although not fresh, were very frequent; as one led along the river I kept it. At 12 miles I crossed the river, and encamped at an old cattle camp, in lat. $29^{\circ} 50' 50''$. No. 26.

20th. Being then further S. than the Barwan, as laid down on Arrowsmith's map of 1838, I ventured to take my horses off the Culgoa, and steer S. for the Barwan. We started at $\frac{1}{4}$ before 7 A.M., and reached the river at 9h. 20m. A.M. I could scarcely credit that it was the main channel we first touched upon, the water being very low, and the current only perceptible in the narrowest and most shallow places. Leaving the carts on the northern bank, I crossed with Harry, and rode about $1\frac{1}{2}$ mile to the southward, not being able to perceive signs of any other channel. I climbed a tree to take the bearing of what I supposed to be Mount Druit, but I saw only tableland, bearing by compass S. 25° W., and Mount Druit E. 5° S., about 5 miles distant. Recrossing the river, we continued our course E.N.E. up its right bank, for $1\frac{1}{4}$ miles, when we came upon a road which we must have crossed before without observing it, and the non-existence of which had much surprised me. Taking the road as the most direct to a station, it brought me into a bend of the river, and what I considered an old encampment of an overland party, as there was a temporary fence across an angle of the river.

The rain having obliterated all the tracks, I, after some search, steered eastward. At half a mile's distance we came again upon the road, kept it for $3\frac{1}{4}$ miles, and turned in upon an angle of the river to Camp 27. Every little incident proving that the country is, or has been, inhabited by a white man, is taken notice of by a party on "spoon diet" approaching a river known to be settled on in part of its course. I first had the pleasure of kindling joy and

hope in the men's hearts, by announcing that our first camp on the Culgoa was only 25 miles from the Barwan, and that we should make that river above Fort Bourke, the lowest point to which the stations were said to extend. That announcement put them on the *qui vive*, and sharpened their eyesight. Almost immediately after a bundle of spears were discovered, tied up by a piece of *cotton handkerchief*. At 25 (next camp) a *pint pot* was picked up by Harry, in a deserted camp of the natives. The following day *cattle dung and bones* were found. The next, or fourth day, *horse dung*, a piece of calf's skin dropped by the gins in their flight from us, a fragment of a Guernsey shirt, another piece of rag, and bullock bones. The fifth day, the track of a calf that must have passed our camp last evening: more bullock tracks and paths: then the Barwan, on the bank of which I found a broken hobble strap and buckle, which I handed over to be scrutinized. About a mile farther we trod ground upon which white men had travelled before, and had driven teams of bullocks drawing drays, with perhaps provisions on them. Our thoughts naturally suggested what a blessing it would be to fall in with one of them.

21st. Having put the men on the track at Mr. Lawson's marked tree, desiring them to encamp at 5 miles distance, I remained to make observations for longitude and time, and to fix the latitude of the camp as accurately as possible. I overtook the party encamped about $3\frac{1}{2}$ miles to the eastward of 27. Our supper consisted of half a duck and two pigeons per man, and a quart of soup.

22nd. Took up the track at an old stock-yard, at which point, in my absence, Mr. Turner had turned in with the party to the river. At 2 miles passed a station called "*Moana*." At 7 miles arrived at Mr. Lawson's lowest station on the Barwan, which is the lowest occupied run on that river. Not being able to procure a sufficient supply of flour to enable me to proceed up the Bogan, in which river I am told there is now abundance of water, I rode on 12 miles to Mr. Druitt's station, taking Niblett with me and two pack-horses. There I learned also that flour was scarce; and the next station, belonging to Mr. Henry Cox of Mudgee (Mulgoa?), was 5 miles higher on the opposite side of the river.

23rd. Rode to Mr. Cox's station, which is in charge of Edward Bosfield, who said he had extra rations of flour, tea, and salt; and accordingly sold me 150 lbs. of flour, at 25*l.* per ton; 6 lbs. of tea, at 4*s.* per lb.; 30 lbs. of salt, at 30*s.* for 100 lbs. I paid by an order on the Bank of Australasia, having ascertained that the rations belonged to the men. Returned to camp in the evening.

24th. In camp all day, fixing my stations on the map. I found this morning my leg much inflamed from the bite of some insect on Tuesday last, 21st inst. Five or six of my men were therefore despatched in search of leeches, by which the inflammation was reduced.

25th. Left Lawson's station and returned to K **XXVII.** whence I in end to cross over to the Bogan. There was a thunder-storm, with a few drops of rain, in the evening. This makes the third Christmas I have spent on expeditions; one on the Bogan, last year on the Namoi, this on the Barwan.

26th. Shortly after sunrise it was discovered that Harry had departed, with his blanket and blue shirt, but leaving his striped trowsers at the camp, as too heavy for him. I at once suspected he had been decoyed by a native of the Barwan we had seen at Lawson's. The weather was intensely hot: but as I had taken charge of the lad from his mother, although only a gin, I considered it my duty to bring him back if possible, and prevent his meeting the fate of two young natives of the Namoi, who, within the last six months, ran from Mr. Ray on this river, and were killed, at a lagoon 1 mile from Lawson's, by the irreconcilable savages of the Barwan. Immediately after prayers I therefore rode, with Costigan, to Lawson's. We tracked the truant the whole way,

and were amused by observing how he had hesitated to pass the grave of a white man who had been killed by the natives, about 3 miles from our camp. Not finding him at the station, I despatched two gins to track him, which they did most cleverly, in places where I could not have discovered the slightest mark. They traced him to the river, where we met some cannibals returning with bark ; they said they had not seen him, but had seen his track going to the next station. This was false, for they had spoken to him. I waited till the storekeeper, who was away, came home ; he instantly put the gins upon the track again, and they succeeded in tracing him past Lawson's on the road to Druitt's. I arrived at the latter station at dusk, and found my friend Harry seated under the verandah. He was much frightened at seeing me. I told him I was not angry at his being desirous of seeing his friends, but at the act of the fellow who had induced him to follow a road on which he would surely have been killed ; and that my only object in going after him was to enable me to return him in safety to the station whence I had taken him ; and at the same time I promised to forward him to the Nammoi the first favourable opportunity, as I found his desire to reach home exceeded his wish to see Sydney. He had walked 24 miles after leaving the camp, and was passing Druitt's station, when a gin saw him, and tried to persuade him to go to the hut, but, not succeeding, she told the hut-keeper, who brought him in and gave him dinner. It was a bold undertaking to seek to reach the Nammoi, a distance of 130 miles, without visiting the stations, and with the certainty of passing through the notoriously cruel tribes of the Barwan. The boy is naturally brave, and of a high and haughty spirit, accompanied, as is usually the case, with a kind and affectionate disposition. He has often said of his mother, "I b'lieve that fellow been boey," a quiet way of expressing his fear that his mother might be dead ; and whenever the men mention his mother's name he turns the subject, or looks as black as thunder, knowing how little respect such men have for gins. He has picked up so much English on the journey that he can make himself understood, whatever he wishes to say ; and, in addition to this, he has acquired an activity and obedience that would be no discredit to a white boy older than himself. His appearance has greatly improved ; no longer a poor child, he has become a tall, well-set lad, with a kind but bold expression of countenance.

27th. Wishing to cross the Barwan to-day, I had the horses tethered, but, owing to some accident, one being tethered on a slope was found dead, with his head downwards. I returned to the camp late, unable to move.

28th. Crossed the Barwan, and, on a S.S.E. course, reached the Bogan in 3 hours ; the bed was so shallow that I doubted whether it was that river. I encamped in latitude $30^{\circ} 4' 24''$ S.

29th. Travelled along the left bank of the supposed Bogan, S. 40° E., and in one hour found myself in the track of Sir Thomas Mitchell's drays. His marked line is so plain that we found the track, although made 13 years ago, and travelled along it up to our camp in latitude $30^{\circ} 14' 13''$. There was a breeze during the early part of the day, but the heat in the afternoon was intense.

30th. Took up Sir Thomas's track and travelled the same stage he did to latitude $30^{\circ} 17' 29''$. Saw the first native, a gin, on the river near the track.

31st. Kept Sir Thomas's marked line for about 5 miles, when we lost it. At about 1 mile in a direction S. 30° E., reached the river, which contained abundance of water. Thence I changed my course to due S., and at $\frac{3}{4}$ mile crossed a spur of *New Year Range* ; and at about 12 miles from our last camp, came upon the river containing shallow holes in a very shallow channel, at which we encamped.

Jan. 1st., 1848. Having crossed to the right bank of the Bogan, I proceeded S. 20° E. about 6 miles through forest, and 8 across plains, encamping where the channel is less defined than in any other part.

2nd. Proceeded S. 20° E. for about 10 miles, when I turned in to the river unfortunately at a bend which took me 4 miles out of my road; encamped at a muddy hole, above and below which clearer and larger holes were found.

3rd. Continued S. 20° E along the W. side of the river; at about 9 miles crossed Sir T. Mitchell's marked line running N.E. At about 13 miles, Mount Hopeless bearing W., I travelled S.E. for the river, which I made at about $\frac{1}{2}$ mile, where it is split into two channels, the smaller being the westernmost, and quite dry. Finding water in the other, we crossed over to it, and encamped. We had a slight thunderstorm in the afternoon, and a clouded night.

4th. Proceeded S. between the two channels. At about 3 or 4 miles we crossed the right one or Bogan, and almost immediately passed Sir T. Mitchell's camp of 21st January, 1846.*

Proceeding at 1 p.m. at 3 miles we came upon our outward bound track on the late expedition (Sir T. M.'s expedition into the Victoria), and at 3 p.m. we encamped just in time to secure dry ground for the tents. The evening commenced with rain from the N.E.

5th. Having encamped upon very level ground, and as it rained all day, we had great difficulty in retaining a space of 6 feet by 2 feet dry enough to sleep on. The weather cleared at sunset.

6th. Detained by the ground being impassable, owing to yesterday's heavy rain.

7th. Started at 9h. 30m. Halted for 1 hour or 2 at Canbelego, where we found abundance of water. In the evening we encamped at Nyingan.

8th. Travelled along Sir T. Mitchell's marked line to Darobel. Punch was put in the traces, and to my astonishment, after his fatigue and unacquaintance with the work, pulled as if he took pleasure in being thus useful.

9th. Continued along the marked line to Muda.

10th. Travelled about 16 miles, and encamped about 2 miles beyond Misery Plain.

11th. Keeping our old route, we halted at Tabritong for 2 hours, and at $\frac{1}{2}$ past 12 o'clock proceeded to Mr. Andrew Ker's station, whither we arrived at 4 p.m.; procured beef, tea, sugar, and 80lbs. flour.

12th. Waited until sunset at Derribong, while the natives ground our wheat. At 7 p.m. reached Mr. Phillips's station, 14 miles, and encamped at 1 a.m.

13th. 14th. Remained in camp.

15th. The carts started at 6 p.m. for Coss's station. The boy and I left the camp with letters, to proceed to Molong. I was misdirected across the river by a man at Coss; and whilst looking for the route we were overtaken by a most violent thunderstorm. We reached Dungan's station at 3 a.m.

16th. Continued our ride. At 9 miles passed Gilmore's station; the proprietor was away, looking for his nephew, who had arrived from Sydney but two days before, and was lost the second evening. At about 45 miles halted at Obley for the night. The station belongs to Mr. Ireland, of the Paramatta road.

17th. Passed through Mr. Terry's station, Buckenbas, on my way to Lee's, on the lake, and arrived in 25 miles. Ascertained that the mail had passed from Wellington. After resting my horse, I proceeded to Molong, and arrived at 10h. 30m. p.m. Mr. Luscombe, the postmaster, kindly opened the bags and inclosed my letters.

18th. Remained in quarters.

19th. Visited the mines and descended the shaft, procuring specimens.

20th. Rode to Mr. Kater's to procure flour and visit the cloth factory. The steam-boiler had burst that morning.

* See *Expedition into Tropical Australia*, p. 38-40.

21st. Returned to Molong in company with Mr. Kater and Hon. Captain Hope, and proceeded to Mr. Barton's at Boree Nyrang, to meet my party.

22nd. The party arrived at 11 P.M.

23d. Wrote to the cashier of the Bank of Australasia, requesting him to refuse payment of my check in favour of Botfield, he having represented to me in the presence of Niblett that flour was selling in Sydney at 30*l.* per ton.

24th. Proceeded to the heifer station, 14 miles.

N.B. The rest of the journal is occupied by notes on the road to Sydney.

NOTE.—The following specimens, deposited in the Australian Museum, Sydney, were collected in the valley of the Victoria during the expedition, and have been determined by the undersigned.

1. Silicified coniferous wood, of the coal formation.
2. Reddish ferruginous clay.
3. Ditto, with small clear quartz pebbles.
4. Ditto, ditto.
5. Felspathic crystals in soft trachytic rock.
6. Ferruginous clay.
7. Conglomerate of shining rounded pebbles and fat quartz, in felspathic paste studded with minute particles of crystalline quartz, like that at the head of the Boyne River.
8. Decomposing greenstone.
9. Whitish, argillaceous, felspathic clay? decomposed trachyte.
10. Altered conglomerate, crystalline quartzose base, with pebbles of quartz; a similar rock is found at Merton, on the Hunter River.
11. Finer grained rock of the same kind.
12. Small fragment of composite rock, with quartz and decomposing *chatoyant* felspar.

W. B. C.

METEOROLOGICAL JOURNAL, extracted from the notes of an Expedition down the River Barcoo (Victoria), under command of Mr. E. B. KENNEDY, with Notes by Rev. W. B. CLARKE.

Locality.	Date.	Thermometer in Shade.			Winds.	Clouds.	Remarks.
		1847.	○	9 A.M.	○	3 A.M.	
Gwydir River	May 1	41	62.5	76	79	W. W.N.W.	Cu. Str.
,,	2	45	75	79	81	W.	..
,,	3	41	53	67	74	W.	..
Gwydir and Boomi	4	30	49	70.5	74.5	..	Close weather, threatening θ. Box forest, clear weather.
Boomi	5	37	62.5	74	79	..	..
Boomi and Barwan	6	37.5	53	75	83	S.W. Calm.	Ch. Cu.
Barwan and Mooni	7	38	47	73.5	77	N.W.S.W. S.W.	..
,,	8	43	60	74	73	W.	Cu. Str.
Mooni	9	39	54	77.5	78.5	..	..
,	10	36	51	78.5	81	Calm.	..
,	11	34	49	73	82	..	..
,	12	36	53	79	84	N.W. W.S.W.	Cir. Cu.
Mooni and Balonne	13	42	62	79	81.5	..	..
,	14	39	60	76	78	N.W. S.	Clear.
Balonne River	15	29	49.5	70	74	N.E.	Cir.
,	16	29	51	74	76	S.	..
,	17	43	53	71	73.5	..	..
,	18	53	65.5	82	85	N.W.S. W. E.	Cir. Str.
Balonne and Maranoa	19	34	59.5	73.5	74	N.E. : W.S.W.	Cir. Str.
Maranoa	20	33	61.5	75	79	..	..
,	21	49	60	72	76	W.S.W. & N.W. W.W.S.W.	Cu. Str.
,	22	52	58	60	62	..	..
,	23	36	46	57	59	W.	Heavy rain and θ in night ; drizzling till 3 P.M.
,	24	25	45	58.5	59	..	..
,	25	20	45	62	60	W.S.W. N.E.	Cool, pleasant day ; fresh breeze.
,	26	26	52	60.5	62	..	At ○ in open pine-forest ; sandy soil.
,	..	..	..	..	..	..	Gusts of wind during the day.
						..	Water frozen at ○ at the camp.

27	•	•	•	27	45	52	55·5	55·5	N.N.W.	..
,	,	,	,	28	48	52	53	53	N.E.	..
,	,	,	,	29	45	54	62·5	61·5	E.S.E.	Cu. Str.
,	,	,	,	30	46	54	62	67	S.E.	Cir.
,	,	,	,	31	34·5	54	67	68·5	W.	..
				June	1	38	54·5	72	73·5	W. & W.S.W.
,	,	,	,	2	45	59	66	74	..	..
,	,	,	,	3	24	43·5	53	60·5	W.	..
,	,	,	,	4	18	39·5	51	51	..	..
,	,	,	,	5	26	42	60·5	60	..	..
,	,	,	,	6	30	44·5	63	63·5	..	..
,	,	,	,	7	22	39	52	59	..	..
,	,	,	,	8	30	45	60	..	..	..
,	,	,	,	9	26	..	60·5	62	S.W.	..
,	,	,	,	10	33·5	44	53	52	W.	..
,	,	,	,	11	19	35	52·5	55	..	..
,	,	,	,	12	15	34·5	55·5	60·5	..	..
,	,	,	,	13	13	34	56	60	E.	..
,	,	,	,	14	18	30	57	59	& S.W.	..
,	,	,	,	15	25·5	41·5	63·5	65·5	S.W.	..
,	,	,	,	16	17	33	72	71	..	..
Maranoa and its tributaries	,	,	,	17	14	30·5	61·5	60	W.	..
,	,	,	,	18	28	46	75	74	E.	..
,	,	,	,	19	32	60	75	74	N.E.	..
,	,	,	,	20	31	66·5	78	84	W.N.W.	..
,	,	,	,	21	32·5	59	71	74	S.	..
,	,	,	,	22	60	59·5	66	69	S.	..
,	,	,	,	23	31·5	..	57	60	N.	..
,	,	,	,	24	43·5	44	46	46	N.	..
,	,	,	,	25	42	43	50	55	S.	..
,	,	,	,	26	18	44·5	53	50	S.W.	..
,	,	,	,	27	16·5	34·5	56	58	Cir.	..
,	,	,	,	28	26	36	60	62	W.N.W.	..
Range dividing waters of Maranoa and Warrego.	,	,	,	29	15	29·5	58·5	62	N.W.	..
				30	23	38·5	56·5	61	Cu.	..

Incessant rain since 4 A.M.
Ditto, strong N.E. breeze A.M.
Clear towards morning; fresh wind all day; cloudy towards evening.

○ in pine-forest, loose sandy soil.

At Camp 79.

Strong W. breeze.

Strong winds and cloudy.
E. air, as usual in the morning, but after 10 A.M. W.

Indications of rain all day.

Variation 9° 5' E.

Clear.
Cir. Cu.
Cir. Cu.
Cir. Cu.

Strong wind.

Rain from 3 A.M. to 8 P.M.

Strong wind.

METEOROLOGICAL JOURNAL, &c.—continued.

Locality.	Date. 1847.	Thermometer in Shade.			Winds.	Clouds.	Remarks.
		○	9 A.M.	○			
Creek E. of Warrego	July 1	14	29.5	51	53	W. W.N.W. N.W.	Cu. Cir. Cir.
Range between Creek and	2	14.5	30	52	54.5	E.	Variation 9° 48' E.; frosty morning.
Warrego.	3	23	35	52.5	56.5	E. & N.E. N.N.E. & W. W.	Fresh.
Warrego	,,	4	9.5	20	51.5	..	Dry cold morning.
,,	5	8.75	38.5	..	55	..	
,,	6	35	50	55	55	..	
,,	7	44	49.5	55	64	..	
,,	8	35	49	60	54.5	..	
,,	9	33	48	56	56	..	Rain.
,,	10	18	44	58	56.5	..	Rain from 3 P.M. to Q.
,,	11	15	43	54	58	..	
,,	12	14	43	58	61	..	
,,	13	18	48.5	60	64	..	
,,	14	31	60	68	67.5	..	
,,	15	45.5	52	62	62	..	
,,	16	46	45	51.5	53.5	..	
,,	17	27	50	56	56	..	
,,	18	23	43	61	61	..	
Creek 2 miles S. of Mount	19	23	40	60	62	..	
Playfair.							
Creek 14 miles W. of	20	31	42	56	60	..	
Mount Playfair.							
Ditto and Nive	21	13	46.5	50	..	Clear.	
Nive River	22	23	45	72	74	Cir. Str.	
,,	23	65	69	78	78	Cir. Cu.	From noon a strong warm wind from W.
Victoria	..	28	55	..	..	..	Squally during the night, with hot blasts; strong warm wind during the day.
	24						Similar weather, but without the hot blasts.

					S.W.		Cir.	Str.	Clear.
25	44	57	65	68	..		Str. δ	..	..
25	42	73.5	76	..	S.		Cir. Cu.	..	Dull; showers from 3 P.M. to \odot
25	53	82	82.5	..	S.E.			..	Fine and clear, with bracing wind
25	47	56.5	60	..				..	from S.
25	26	18	44	55	58	..		..	Appearances of rain; a few drops
25	27	31	44	44	59.5	62		..	fall in the evening.
25	28	44	47	56	56.5	..		..
25	29	26	38	38	70	72		..	
25	30	16	44	44	74	82		..	
25	31	18	43	43	87	90		..	
Aug.	1	26	44	56	86	87		..	
		2	28	38	90	90		..	
		3	26	44	93	93		..	
		4	15	34	94	94		..	
		5	17	36	95	95		..	
		6	19	37	96	96		..	
		7	19	37	97	97		..	
		8	22	38	98	98		..	
		9	28	40	98	98		..	
		10	30	50	99	99		..	
		11	19	..	71.5	73		..	
		12	31	52	76	78		..	
		13	30	52.5	79	79.5		..	
		14	27	60	77	78		..	
		15	32	65	79	79		..	
		16	45	65	79	87		..	
		17	35	66	77	79		..	
		18	38	67	78	79.5		..	
		19	36	67	79	79.5		..	
		20	33	72	85	86		..	
		21	33	87	89	89		..	
		22	49	65	76	76		..	
		22	55	68	75	75		..	
		23	22	55	74	78		..	
		24	22	47	67	79		..	
		25	47	67	79	79		..	

METEOROLOGICAL JOURNAL, &c.—continued.

Locality.	Date.	Thermometer in Shade.			Winds.	Clouds.	Remarks.
		1847.	○	9 A.M.	○	3 P.M.	
Victoria	Aug.	46	71	79.5	79	..	Clear.
"	26	47	71	79	79.5	..	..
"	27	45	74	78.5	79	..	Strong N.E. after 9 A.M.
"	28	45	74	86	87.5	..	..
"	29	48	74	93	94.5	..	Ditto.
"	30	53	77	93	96	..	Strong from E. and N.E. [Heavy gale on E. coast of Van Diemen's Land, 26th, 27th, 28th; strong N.E. and N. winds off Sydney.—W.B.C.]
Victoria and Desert	31	49	76.5	..	N.E.	..	..
	Sept.	33	62	83	85	N.	Cum. Clear.
"	1	45	67	85	86	..	..
"	2	45	67.5	85	..	..	..
"	3	45	67.5	..	..	..	Absence of other observations, due to want of trees for shade.
"	4	52	..	..	..	..	..
		5	53	68	96	97.5	..
"		6	56	..	96	..	..
"		7	55	72	96	..	..
"		8	53.5	..	97.5	..	..
"		9	56	..	..	..	..
		10	46	..	..	..	Cu. St. Cu. Str.
"		11	56	77	92	91	..
"		12	57	77	95	94.5	..
K.		13	54	70	83	80	..
III.		..	..	..	..	..	..
"		14	54	73	85	84.5	..
	
							Water boiled at 214°; Ther. 64°.
							Distant θ in evening; night fine and still.

Victoria and Desert.	15	52	70	82	83.5	••	••
Desert.	16	52	65	79	82	N.E.	Cum.
,	17	52	••	84	86	••	••
,	18	50	70	86	86	S.E.	••
,	19	49	65	80	81	N.E. to S.E.	••
,	20	53	70	84	86	••	••
,	21	53	••	••	••	N.E.	••
Victoria.	22	60	75	90	91	N.E.	Cir. Cu.
,	23	55	72	86	87.5	••	••
,	24	54.5	••	86	••	••	••
		25	60	73.5	87	N.E. to S.E.	••
		26	52	71	85	87.5	••
		27	50	72	88	••	••
		28	51	69	86	••	••
		29	52	72	83	••	••
		30	41	65	••	80	••
		Oct.					
		1	46	72	83	N.E.	Cu.
		2	51	73	84	••	••
		3	50	74	••	86	Cir.
		4	51	72	85	••	••
		5	44	70	82	84	••
		6	46	76	87	S.E.	Cu.
K.	7	53	••	93	93	Calm.	Cir.
XII.	8	55	76	93	96	N.	Cu.
XIII.	9	52	••	92	92	••	Cir. Cu.
,	10	67	76	90	92	••	••

During the latter part of this month,
the winds invariably from N.E. at
8 A.M., shifting to S. in P.M. [On
the coast, at Moreton Bay, the winds
from N.E. during the day, and S.
at night.—W. B. C.]

Stormy. [Violent S. gale at Sydney,
&c.—W. B. C.]
Zodiacal light very brilliant till 8 P.M.,
apex extending nearly to a Ser-
pentis.

[Feathery cirrus streamers, St. Leon-
ard's, 9 A.M.—W. B. C.]
“Mackerel sky” at 9 A.M.
Water boiled at 212°75; Ther. 82°.

Fog at ☼; hazy all day.
Oppressive hazy day.
Strong S. wind at ☐.

METEOROLOGICAL JOURNAL, &c.—continued.

Locality.	Date.	Thermometer in Shade.			Winds.	Clouds.	Remarks.
		1847.	Oct.	9 A.M.	3 P.M.		
K. XIII.	11	62	75	90	92	S.E.	Cum.
,"	12	55	..	89	90	S.E. & N.E.	Cu. 82° at 9 A.M. θ in S.W.
,"	13	61	..	89	90	S.E. & N.E.	Squally weather set in 13th, at 6 30 P.M., with θ from W., cleared at 10 P.M., with wind at E.N.E. Strong gale, and θ at St. Leonard's same day.—[W.B.C.]
,"	14	58	..	86	90	..	Bank in E. at C. clear to W.
,"	15	56	72	91	94	E.	Light.
Victoria	16	56	78	81	84	E.	Heavy gale from 2 P.M. to 4 A.M. of 17th. [Rain ceased 4 A.M. at St. Leonard's.—W.B.C.]
,"	17	56	..	84	86	..	Fresh breeze all day.
Nive	18	62	78	82	83	..	..
,"	19	62	78	82	83	..	..
,"	20	..	..	..	..	..	..
Warrego	21	62	78	82	84	N.E. N.E.	Cir. Str. Cir. Str.
,"	22	62	78	..	..	N.E. & S.S.W.	Cir. Str. Cir. Str.
,"	23	62	..	84	82	W.	Cir. Str.
,"	24	61	70	72	78	W. & N.W.	..
,"	25	62	78	81	82	..	Cu.
,"	26	56	..	..	..	..	..
,"	Nov.	..	..	..	..	..	..
,"	16	62	77	87	86	S.W.	Cu.
,"	17	..	..	..	..	..	Clear.
,"	18	..	..	..	..	..	..
Ponds.	19	..	..	..	..	..	..

NOTES TO THE FOREGOING TABLES.

From the 17th to 26th of June are the observations of Mr. Turner. If there are errors in these readings (as at 22nd with S. wind), there are no means of correcting them. Yet, on comparing these readings with my own Journal, kept at St. Leonard's, I find that on 20th June there was there a hot wind and thunder storm, with the lowest barometrical state since 1st Jan. A violent squall occurred at St. Leonard's at 2 P.M.; at Port Stephens at 2 P.M., and 300 miles to E there was at sea a heavy gale at 7 P.M. The barometers here fell gradually from 14th June. Two barometers in my house indicated a mean of 18 observations that day, 29°.313 and 29°.118, or 29°.164 and 29°.029 (corrected). At Port Stephens, Captain King, R.N., at 22nd recorded 29°.492, and in 34° S. 156° 30' E. the barometer in the Garland Grove showed 29°.44.

The observations from 5th to 16th of July inclusive were made by Mr. Turner.

From 18th to 25th July inclusive, all along the E. coast of N.S.W. we had most furious gales from N.W. and W. with great depression of the barometer; trees were blown down, and ships wrecked. As indicating the connexion of Kennedy's warm wind with our gales, the following barometrical means of 18 observations on 22nd July corrected will suffice, viz. 29°.010 and 28°.814. It was the result of a circular gale from S.E. to S.W. of St. Leonard's, passing to N.E., left to right. The mean of two barometers 22nd (18 observations) was 28°.912; 23rd (13 observations) was 28°.902; the elevation of this locality is 300 feet above the sea.

The extracts from my own Journal are made to point out how closely the weather in the interior corresponds with that on the coast. There are other very remarkable coincidences not mentioned. I can only regret that there are no means of comparing barometrical readings. Mr. K. has given some instances of *boiling* temperature. On his return I examined his thermometers—they appeared to me altogether unsuited for such experiments. One of the instruments, the indications of which are recorded in the MS., I rejected, having found it varied several degrees from the one which gave the results in this table. Mr. K. after my examination of them admitted the boiling temperatures to have little value.

The excessive cold at sunrise on various occasions is quite in accordance with the observations of Sir T. L. Mitchell, in the same part of the interior, in a former year. On the 4th and 5th of July, Mr. Kennedy noticed a temperature of 9°.5 and 8°.75 Fahr. Sir T. L. Mitchell had sunrise temperatures of 11° and 12° in May and June 1846, and states in his despatches that "on almost every clear night, Fahrenheit's thermometer fell to 9°, and occasionally at 4 A.M. the mercury was as low as 7°." Occasionally a temperature of 15°, and on one occasion of 6°, has been registered in June, in the county of Camden.—W. B. C.